Mark Scheme (Results)

Summer 2018

Pearson Edexcel GCSE

In Geography Spec B (1GB0) Paper 1

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Mark Scheme

Question number	Answer	Marks
1a(i)	A - a liquid layer of 2200km in thickness. Incorrect responses: B – a solid layer with temperatures over 5000˚ Celsius. The outer core is labelled as being liquid. C – a layer of partly molten and partly solid rock. The outer core is labelled as being liquid. D – a solid layer of 1300km in thickness. The outer core is labelled as being liquid.	1
1a(ii)	C – inner core. Incorrect responses: A, B and D. Density generally increases with depth. The inner core is the layer with the highest density being made mainly of iron and nickel and solid. The outer core is also primarily iron and nickel but as it is molten that lessens the density.	1
1b(i)	Award 1 mark for identifying a physical process causing a tsunami and a further mark for explanation. ● Tsunami can be caused by earthquakes (1) caused by plate movement. (1) ● Tsunami can be caused by landslides (1) which causes water to be displaced generating waves. (1) ● Tsunami can be caused by underwater volcanic eruptions (1) which causes water to be displaced giving large waves. (1) ● Tsunami can be caused by large meteor strikes (1) which displaces large quantities of water causing large waves. (1) ● Upward movement of a tectonic plate (1) causing the movement of water. (1) ● The movement of plates (1) causes friction to occur (1) ● Earthquakes (1) transfer energy to the water causing it to move. (1) No mark for simply stating tsunami are large waves. Accept any other appropriate response.	2
1b(ii)	C – destruction of buildings. Incorrect responses: A, B and D These are all secondary tectonic hazards.	1
1c(i)	Award one mark for each descriptive point up to a maximum of 3 marks.	3

	● Carbon dioxide concentrations / mean temperatures fluctuate over the period. (1) ● The trends have a similar pattern. (1) ● Trend in carbon dioxide described (may use numeric data). ● Trend in temperature described (may use numeric data). ● As the concentrations of carbon dioxide rise so do the temperatures in Antarctica. (1) ● There has been an increase in the mean temperature/carbon dioxide ppm over the period. (1) Do not accept mirrored answers. Max 2 marks if only one trend is described. Max 2 marks if no use of data. Data may be manipulated to score marks. For example, 'the CO2 concentration increased by 140 ppm over the **period.**' Accept any other appropriate response.	
1c(ii)	Allow 1 mark for identifying a natural cause of climate change and a further mark for explanation. ● Volcanic eruptions (1) cause cooling as incoming solar radiation is blocked by volcanic dust. (1) ● Asteroid collisions (1) can cause cooling as large quantities of ash and dust to be kicked up into the atmosphere. (1) ● Increased/decreased sunspots/solar flare activity (1) cause warmer/cooler periods as more/less solar energy is released towards the earth. (1) ● Changes in the earth's orbit / Milankovitch cycles (1) can cause cooling or warming of the earth as the amount of solar radiation received by earth varies. (1) ● Volcanic eruptions (1) can lead to a warming of the earth as more carbon dioxide is released. (1) Accept any other appropriate response.	2
1d	C - recorded wind speeds. Incorrect responses: A - satellite imagery. This makes no contribution to Saffir-Simpson scale data B - seismometer readings. These focus on tectonic activity. D - thermometer readings. The Saffir-Simpson scale categorises tropical cyclones according to their wind speed.	1

1e(i)	Allow 1 mark for each correctly identified feature increasing Haiti's vulnerability and further mark for how this contributes to Haiti's vulnerability, up to a maximum of two marks each. ● Haiti has a low GDP (1), therefore the population is less able to afford housing that can withstand extreme events (1), less able to purchase resources needed for disaster response (1), less likely to have insurance policies that help people to recover (1), less likely to have technology to help to alert the population (1). ● Haiti has a low HDI (1), the population are less likely to be educated regarding hurricane preparation (1). ● Most of Haiti is a short distance from the coast (1) which means that it is difficult to evacuate. ● The path of the storm was forecast to hit Haiti in the next 24 hours (1) with the observed location on Oct 3rd being less than 200km away from Haiti (1). Do not accept mirrored answers. Must use Figure 3. Accept any other appropriate response.	4
1e(ii)	Allow one mark for each correctly identified reason why GIS storm track maps can be useful and a further 1 mark for why this feature is useful for preparation, up to a maximum of 2 marks each: ● Shows the intensity of wind speed (1) so measures can be put in place to evacuate people (1). ● Shows the speed the storm is moving (1) so populations can be given accurate predictions of when the storm will impact (1). ● Historical data can show the likely track taken by storms (1) so potential areas affected can be identified and measures put in place (1). ● Shows coastal areas which may be affected by storm surges (1) so that appropriate evacuation measures can be put in place (1). ● Enables countries to predict the path of the tropical storm (1) so they know which areas to evacuate. (1) Accept any other appropriate response.	4
1f	Award one mark for Identification of one legitimate area of low pressure and high rainfall e.g. ITCZ (accept equator) or Ferrell/Polar cell boundary at 60 degrees N/S (1). Award one mark for the mechanism for air rising e.g. 'hot air at tropics' or warm/cold air convergence at Ferrell/polar boundary (1). Award one mark for the mechanism that creates rain - rising air = condensation, cloud (1). ● The ITCZ/equator is a low pressure area with high rainfall totals (1). Here, warm air rises (1), cools and clouds are created (1). ● A further area of low pressure is found at around 60°N and S of the equator (1). Warmer air rises as it meets colder air (1), and water vapour condenses (1). ● At the equator (1), less dense air rises (1), cools and condenses giving rain (1). Give credit to diagrams taking care not to double credit.	3

1g	AO2 (4 marks) / AO3 (4 marks) AO2 (4 marks) ● Developed nations governments are able to provide large amounts of monetary assistance and rapidly mobilise the military to assist the area. E.g. the US government had mobilised 58000 National Guard troops and provided $62.3bn aid for victims. ● Due to higher levels of development, governments are often able to mobilise medical experts, search and rescue equipment and staff trained in emergency disaster management to aid those affected. ● Accurate tracking of cyclones in developed nations enables a coordinated evacuation programme. ● Emergency accommodation can be rapidly deployed to aid victims although often not enough is supplied by government authorities. ● The international community often responds rapidly to such events. Over 70 countries pledged monetary assistance to the USA following Katrina with NGO's such as the Red Cross providing assistance. ● Following accurate tracking of a cyclone, governments are able to action such as raising sluice gates. Expect students to make the distinction between the short-term and long-term responses of a tropical cyclone to access 4 marks in AO2. AO3 (4 marks) ● Judgement regarding the effectiveness of the evacuation procedures. For example, the evacuation order of New Orleans was not passed until less than 24 hours before Hurricane Katrina made landfall. ● Judgement regarding the speed of the government response. ● Judgement regarding the effectiveness of restoring basic needs for the population. ● Judgement regarding the effectiveness of disaster management procedures e.g. The New Orleans Superdome was designed to accommodate 800 people whereas over 20,000 arrived). ● Judgement regarding the effectiveness of technology to predict cyclone landfall - developed nations often have many satellites although the US did have many older satellites, some of which had stopped working. ● Judgement about the effectiveness of subsequent preparation measures put in place following a cyclone event e.g. levee height has been raised around New Orleans to protect from a future storm surge. ● Judgement about the effectiveness/ineffectiveness of other response strategies put in place.	8

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Question number	Answer	Marks
2a(i)	A – the total value of goods and services produced within a country during one year. Incorrect responses: B,C,D. GDP is a monetary measure of the value of goods and services produced by a country in a given year. The distractors all refer to a combination of imports and exports.	1
2a(ii)	C – the average number of years attending school. Incorrect responses: A – refers to maternal mortality. B – refers to the fertility rate. D – refers to the economically active population.	1
2b	Award 1 mark for correctly identifying life expectancy as a component of the HDI, and a further mark for explanation of life expectancy or its link to human health. ● HDI measures life expectancy (1) which is the average number of years a person is expected to live (1) ● Life expectancy (1) gives an indication of the level of access to health services (1). ● Life expectancy (1) will be influenced by the % of the population with access to safe water (1). ● HDI measures life expectancy (1) a high life expectancy indicates a healthy population (1). Accept any other appropriate response.	2
2c	Award one mark for correctly identifying an obstacle/enabler to development posed by topography and further marks for the explanation of that point up to a maximum of three marks. ● The steep relief of mountainous areas (1) makes the construction of transport routes difficult (1) which reduces trade with other areas (1). ● Topography makes growing crops difficult (1) as farm vehicles find it difficult to operate (1), reducing people's income (1). ● Steep slopes (1) are not attractive locations for industry/infrastructure (1) reducing employment / income generation opportunities (1). ● Areas which are flat (1) are often attractive to industrial development (1) creating jobs / increasing income generation opportunities (1). ● Mountain areas are often isolated (1) due to a lack of transport infrastructure (1) making trade with other areas difficult (1). ● Mountainous areas have reduced temperatures/thin soils (1) which makes the growing of crops difficult (1) limiting the ability of the population to earn income (1). ● Harbours with deep water (1) can lead to increased amounts of trade (1) attracting industry to the area (1). Accept any other appropriate response.	3
2d(i)	$85.2 billion, accept 85.2.	1

2d(ii)	Allow 1 mark for a calculation format showing knowledge of percentage increase. Difference between two figures / by original figure x 100). 1 mark for answer of 211.5%.	2

2e	Award 1 mark for identification of a disadvantage, and a further two marks for explanation of this reason, up to a maximum of 3 marks. ● Local people's needs are not adequately considered (1). For example, the Three Gorges Dam project in China forced 1.3 million people to leave their homes (1) breaking up many communities (1) ● By not fully understanding local people's needs (1), large energy generations projects such as dams can flood farmland (1), causing the loss of valuable farmland (1). ● By disrupting the migration of fish (1), the construction of dams has reduced the population of certain species (1) disrupting food chains (1). ● Growth poles take resources away from peripheral areas (1), creating inequalities (1) and fuelling rural-urban migration (1). ● Top down strategies are often expensive (1), requiring countries to borrow large amounts of money (1) and getting into debt problems (1). ● Funding top-down projects requires large amounts of money (1) which requires external borrowing (1) with conditions often attached to these loans (1). ● Local people's viewpoints are not taking into consideration (1) which can cause resentment of the strategy (1) and lead to protests / riots (1) ● The local people do not get what they want (1) because the project is run by the government (1). This means that it is rarely used by the community (1). Accept any other appropriate response.	3

2f(i)	Award 1 mark for any of the following: 5.5:1 550 to 100 55:10 550:100 110:20 (or 110 to 20) 22:4 (or 22 to 4) 11:2 (or 11 to 2)	1
2f(ii)	Award one mark for the identification of a suitable data presentation technique and a further mark for how it would show the increasingly urban nature of China's population. ● A line graph could be constructed (1) with lines drawn showing the urban and rural change over time with dates on the x axis (1). ● A bar chart could be constructed (1) with the urban population figures on the y axis and the years data on the x axis (1). ● Three compound bar graphs could be drawn for each year (1) showing the increasing urban / decreasing rural population over time (1). ● Line graphs (1) could be used to show how the urban/rural population changes over time (1). ● Pie charts (1) could be drawn for each year showing the changing percentages of rural/urban populations over time (2). Accept any other appropriate response.	2
2f(iii)	Award one mark for identifying a negative impact on human health and a further mark for explanation of this impact, up to a maximum of two marks. Must have cause and effect. ● A major problem in urban areas is air pollution caused by vehicle emissions/industrial activity/power generation/waste generation (1) This causes many health problems such as heart disease/lung disease/ bronchitis (1). ● Water pollution is caused by the unsafe disposal of sewage / groundwater pollution from pit latrines / industrial discharge / agricultural runoff (1). This causes cholera/ dysentery/ typhoid (1). ● Increased agricultural runoff (1) can lead to cancers (1). ● Global climate change (1) has resulted in extreme heat and depletion of water sources (1). ● Urban medical services are being overrun (1) due to increasing migration to urban areas (1). ● Increasing disposable income (1) is leading to obesity (1). ● Increased car ownership (1) leads to air pollution (1). Accept any other appropriate response.	2

2f(iv)	Award 1 mark for correctly identifying a socio-economic difference (up to 2 marks) with further marks for explanations of the difference. The answer will largely depend on the chosen emerging country but differences could include: ● Examples of socio-economic differences that could be identified - Population density and rates of growth, average income levels, ethnic differences, migration history and trends, levels of economic growth and structure, health and education provision. (max 2 marks) ● Reasons given to explain the differences – geographic location/isolation and the ease of historical trade, differences in land fertility and topography, the development of industry and the cycle of growth idea, a flow of skilled labour to the core, government policies. (max 2 marks). ● In India, Maharashtra has a higher population density than Bihar (1). Mumbai is in Maharashtra which attracts migrants from rural areas for work (1). ● Shanghai has a higher population density than Gansu (1), Shanghai's coastal location has seen it grow as an important port attracting workers (1). Do not credit very generic differences such as the core is rich and the periphery is poor. Accept any other appropriate response.	4

2g	AO2 4 marks / AO3 4 marks A02 4 marks ● TNC investment / outsourcing creates employment and taxes being paid to the host government, boosting GDP. ● Tax revenue is invested in the local economy resulting in rising living standards. ● TNC's often take advantage of tax incentives, minimising the economic benefit to the host country. ● Globalisation creates increased employment opportunities and brings foreign currency to the host country. ● TNC investment / outsourcing results in advances in communication and transport technology. For example, new companies often develop transport links in the local area. ● TNC's can compete unfairly with indigenous companies. ● Outsourcing leads to TNC's exploiting cheap labour with local people often badly paid. ● Globalisation enables workers to migrate more easily. Some emerging countries find it difficult to keep their best skilled workers, who are attracted by higher wages elsewhere e.g Indian doctor migration to the UK. ● FDI can result in the transfer of managerial expertise from developed to emerging economies. ● Emerging economies are more affected by the global economic cycle. For example, a deep recession in developed nations will effect emerging economies. The global credit crunch had a very damaging impact on emerging countries' economies. ● TNC's are footloose and globalisation means that they can transfer their business out of an emerging country to another location at any time. AO3 ● Some areas may benefit economically from globalisation whereas others lose out, for instance, the concentration of TNC's in urban areas can lead to increased regional differences between core and periphery areas. ● Comments regarding the income inequalities caused by globalisation at a local (city-wide) and national level. ● Makes judgement regarding the overall economic contribution of TNC's. For example, many profits from foreign TNC's often return to developed nations with little overall economic benefit in emerging countries. ● The impacts from such globalisation are often linked. For example whereas government/TNC investment may create growth poles in one area this may be to the detriment of peripheral areas leading to increased rates of rural-urban migration. ● Overall evaluation as to whether the economic costs or benefits are more significant drawing upon evidence.	8

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)

		● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Marks for SPGST		
Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* ☐ Learners write nothing. ☐ Learner's response does not relate to the question. ☐ Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* ☐ Learners spell and punctuate with reasonable accuracy. ☐ Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. ☐ Learners use a limited range of specialist terms as appropriate.
SPaG 2	2-3	*Intermediate performance* ☐ Learners spell and punctuate with considerable accuracy. ☐ Learners use rules of grammar with general control of meaning overall. ☐ Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* ☐ Learners spell and punctuate with consistent accuracy. ☐ Learners use rules of grammar with effective control of meaning overall. ☐ Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
3a	D – an increasing proportion of a country's population living in urban areas. Incorrect responses: A – refers to suburbanisation B – refers to counter-urbanisation C – the process of urbanisation refers to an increasing proportion of a population living in urban areas, not necessarily an increasing number. This distractor also purely focuses on city-centre locations.	1
3b(i)	Accept any of the following characteristics of informal employment: ● Income is not taxed (1). ● Activities are not recognised by the government (1). ● People work for themselves (1). ● Low-skilled work (1). ● May be at home or on the streets (1). ● No health and safety protection (1). ● Little capital needed to establish business (1). ● No contract (1). ● Not legal (1). ● No insurance (1). ● No sick pay (1). Accept any other appropriate response.	1
3b(ii)	Award one mark for correctly identifying that there are often an insufficient number of job opportunities being created in the formal sector and a further mark for explanation. Must have the idea of why the informal sector is growing rapidly to gain the 2nd mark. ● There are not enough jobs in the formal sector (1) to cater for rapid population growth caused by migration (1). ● Jobs in the formal sector are not being created quickly enough (1) to cope with the high rates of rural-urban migration (1). ● Large numbers of rural migrants (1) have a skill shortage for formal employment in the city (1). Accept any other appropriate response.	2
3c (i)	Location X – C - Residential. Location Y – D – Commercial. Incorrect responses: Location X – A,B,D,E The satellite image shoes a suburban street pattern indicating residential land use. The correct answer is therefore C. Location Y – A,B,C,E The satellite image shows a high density concentration of buildings and the key indicates that this is the central business district of Sunderland. The correct answer is D as CBD's are dominated by commercial land use.	2

3c (ii)	Award one mark for each correctly described feature of the location of Sunderland's CBD up to a maximum of 3 marks.	3

	● The CBD is found close to the coast/harbour/bridge/River Wear (1), in the East/South-East of the city (South-East corner of the map.) (1) ● The CBD is found to the South of the River Wear (1). ● The CBD is found approximately 2km (1) to the South-East of the new Wear crossing (1). ● The CBD is found approximately 4km (1) to the East of the A19 (1) Maximum 1 mark for proximity to a feature. Do NOT credit descriptions of the situation of the CBD. **'It** is surrounded by **housing'.** Accept any other appropriate response.	
3c (iii)	Award one mark for identifying a factor influencing the location of the IAMP, and a further mark for extension of that factor, up to a maximum two marks each. ● The IAMP is located close to the A19 (1), so that manufactured goods can be transported easily to other parts of the country (1). ● The IAMP is located next to the Nissan Car Plant (1). This may help as manufacturing resources/expertise can be shared (1). ● The IAMP is located on the outskirts of the city (1), it is a large site so low cost land will be important (1). ● The IAMP is close to the proposed new River Wear crossing (1), better transport links will make it easier to transport manufactured goods to other parts of the country (1). ● The IAMP requires a large site (over 5km^2) (1), the proposed edge of city location has a large amount of available land (1). ● Government incentives (1) may encourage industry to locate in the area (1) ● The area is a greenfield site (1) which is less expensive to build on (1). Accept any other appropriate response.	4
3d (i)	Award one mark for demonstrating understanding of calculating the mean of the population growth of the three South American cities. Allow one calculation format (addition of three figures) division by 3 (1). Final answer is 15.3% or 15.3 (1).	2
3d (ii)	Award one mark for identifying a social challenge caused by the rapid rates of growth and further marks for explanation of the social challenges caused by the rapid rate of growth, up to a maximum of three marks. ● Housing shortages (1) result in people living in squatter settlements (1) without access to basic services (1) ● The majority of employment in developing country megacities is in the informal sector (1), workers have no protection (1) and work is irregular/hours are long (1). ● Increased air pollution (1) caused by traffic congestion/increasing vehicle emissions/ineffective regulations (1) causes serious health issues including breathing disorders (1) ● Low percentages of people are connected to public sewer systems (1). Septic tanks and pit latrines can overflow into open drains (1) which leads to the spread of disease (1). ● Residential land is too expensive for many people (1). Many are forced into crowded slums (1) with poor access to basic services (1). ● Job shortages (1) as a result of large numbers of migrants (1) with the city not having enough formal employment (1)	3

	● The overuse of groundwater supplies (1) leads to water shortages (1) and can lead to subsidence (1) ● Rapid rates of growth exceed the ability of local authorities to provide services (1) such as an adequate water supply (1), leading to the spread of disease (1) Accept any other appropriate response	
3e (i)	Accept any one from: ● Rural - urban migration (accept migration, in-migration or immigration) (1). ● Natural increase (1). Pull factors such as: ● More job opportunities (1). ● Better educational prospects (1) ● Better access to healthcare (1) Push factors such as: ● Drought (1) ● Lack of investment (1) ● Commercialisation of agriculture (1) Accept any other appropriate response	1
3e (ii)	Award one mark for identifying an indicator of quality of life and further marks for explaining why it varies. ● There are income variations within Mexico City(1) with high levels in La Condensa compared to Neza (1). The lack of a formal education can prevent residents accessing formal sector work (1). ● Levels of pollution can vary between residential areas (1). Air (water) pollution is often higher close to industrial areas (1) this negatively impacts on human health. ● The quality of housing shows large variations (1), shanty towns are found on areas of marginal land (1) often with a lack of basic sanitation facilities (1) ● Higher quality housing (1) is often found close to the central business district (1) therefore there is a wider range of amenities (1) Max 2 marks if the answer is generic and makes no reference to residential areas in the megacity. Allow any other acceptable response.	3

3e (iii)	AO2 (4 marks) / AO3 (4 marks) Expect many candidates to discuss top-down and bottom-up development projects. AO2 (4 marks) ● Sustainability involves meeting the needs of the present without compromising the ability of future generations to meet their needs. ● Sustainability can be measured in terms of social, economic and environmental costs and benefits. ● Sustainability can be viewed as a quadrant focussing on equality, the future, public participation and environmental impact. ● Details of social, economic and environmental impacts of the chosen strategies. AO3 (4 marks) ● Judgement regarding overall social sustainability - whereas top down-projects often fail to fully consider the needs of local people, bottom-up strategies tend to inherently consider their needs. ● Bottom-up strategies whilst often being more sustainable often benefit a smaller number of people whereas top-down projects may have a huge impact - over 100 million people are protected by flooding by the Three Gorges Dam. ● Judgement regarding overall economic sustainability - Huge cost involved in top-down strategies. For example, the government-led Dharavi redevelopment project cost an estimated $2bn. Such projects often result in overseas debt from the loans borrowed to fund schemes. ● Judgement regarding overall environmental sustainability - In Rio de Janeiro, the BYD electric buses are zero emission and have led to significant reductions in particulate matter along the Water to Santa Carioca line. ● Judgement about which factor has the greatest influence on sustainability. Accept any other appropriate response	8

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Write your name here

Surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number	Candidate Number

Geography B

Paper 1: Global Geographical Issues

Tuesday 22 May 2018 – Afternoon **Time: 1 hour 30 minutes**	Paper Reference **1GB0/01**

You must have: Calculator	Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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P 5 2 3 6 9 A 0 1 2 8

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SECTION A

Hazardous Earth

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1.

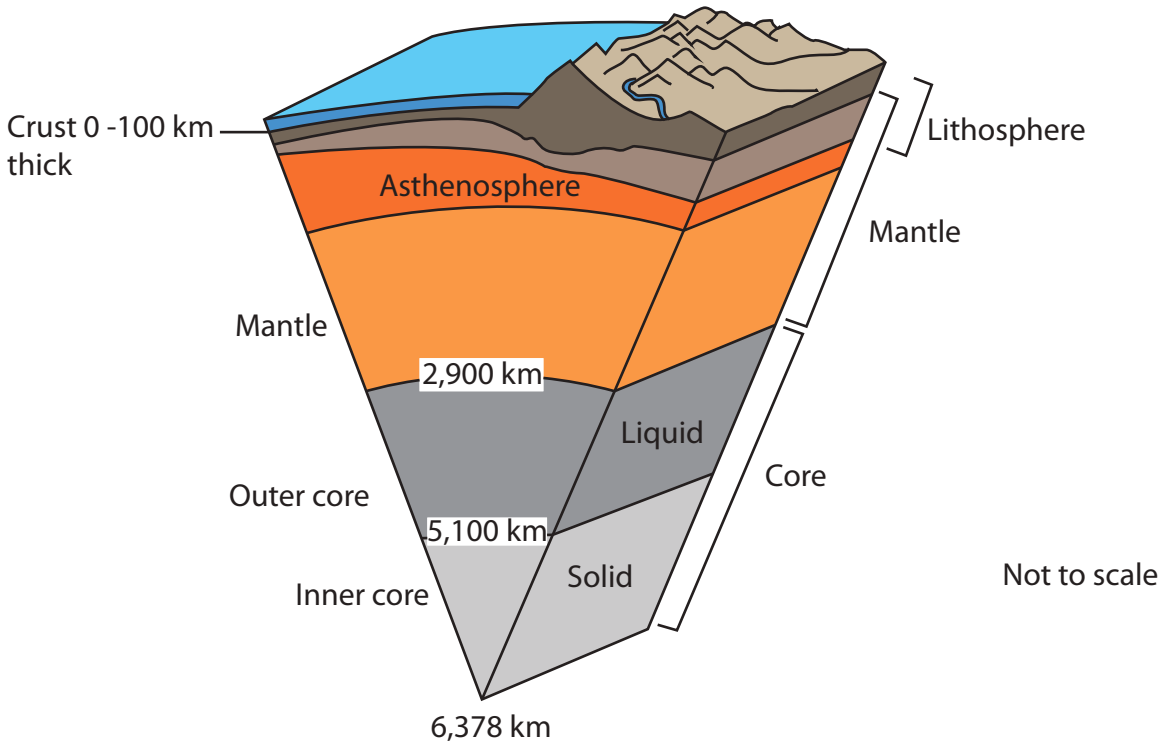


Figure 1

The Earth's layered structure

(a) (i) Identify which **one** of the following describes the outer core.

(1)

☒ **A** a liquid layer of 2 200 km in thickness

☒ **B** a solid layer with temperatures over 5000˚ Celsius

☒ **C** a layer of partly molten and partly solid rock

☒ **D** a solid layer of 1 300 km in thickness

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(ii) State which **one** of the Earth's layers has the highest density.

(1)

- ☒ **A** mantle
- ☒ **B** crust
- ☒ **C** inner core
- ☒ **D** outer core

(b) (i) Explain **one** cause of a tsunami.

(2)

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(ii) Identify **one** primary impact of tectonic hazards.

(1)

- ☒ **A** loss of employment
- ☒ **B** spread of disease
- ☒ **C** destruction of buildings
- ☒ **D** homelessness

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(c) Analyse the data in Figure 2.

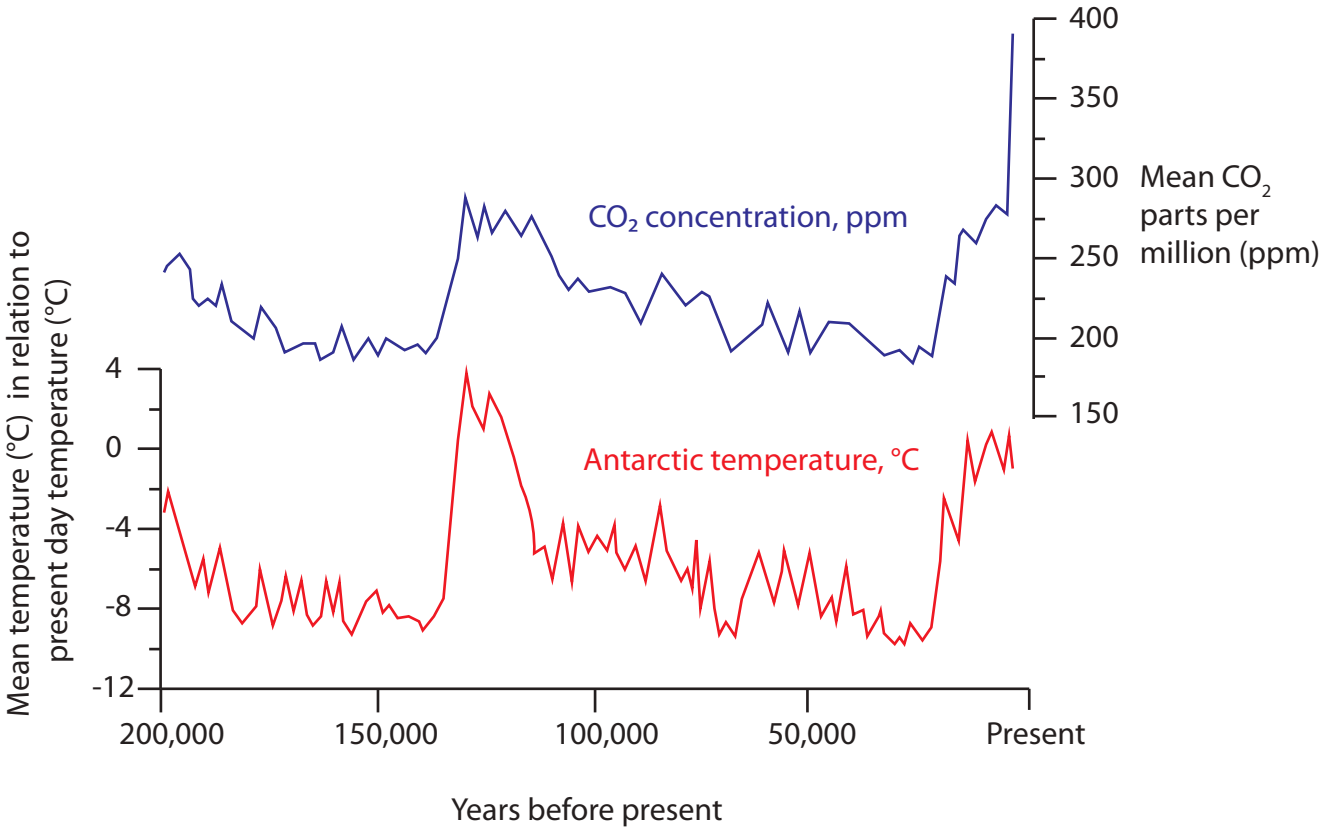


Figure 2

Mean Antarctic temperatures and atmospheric CO_2 concentration over the past 200,000 years

(i) Describe the trends in mean Antarctic temperatures and CO_2 concentration as shown in Figure 2. Use numeric data in your answer.

(3)

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(ii) Explain **one** natural cause of climate change.

(2)

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(d) The Saffir-Simpson Scale measures the magnitude of tropical cyclones.

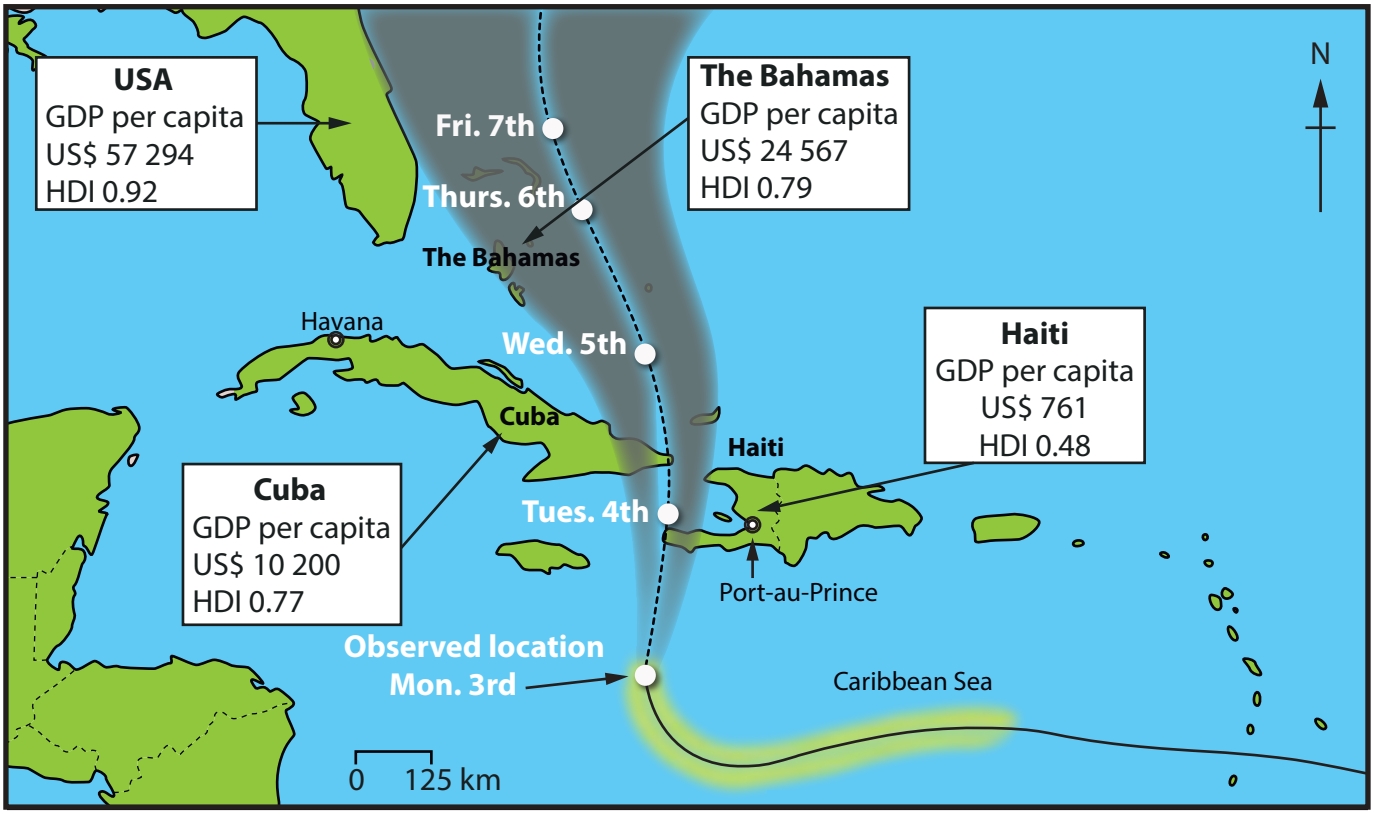
Identify **one** source of data used to calculate the Saffir-Simpson Scale of a tropical cyclone.

(1)

- ☒ **A** satellite imagery
- ☒ **B** seismometer readings
- ☒ **C** recorded wind speeds
- ☒ **D** thermometer readings

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(e) Study Figure 3.



Key

- capital city
- actual path of the storm before 3rd October
- predicted path of the storm after 3rd October
- possible range of predicted storm paths
- area of hurricane force winds before the 3rd October

	USA	Haiti	The Bahamas
Total Deaths	33	1 027	27
GDP per Capita (US$)	57 294	761	24 567
HDI (Human Development Index)	0.92	0.48	0.79

Figure 3

Actual and predicted path of Hurricane Matthew (Oct 2016) and data for selected countries

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(i) Haiti appears to be very vulnerable to the impacts of Hurricane Matthew.

Using Figure 3, suggest **two** reasons why.

(4)

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(ii) Figure 3 includes a GIS cyclone track map.

Explain **two** ways maps such as these can help countries to prepare for tropical cyclones.

(4)

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(f) Explain **one** way in which global atmospheric circulation determines the location of high rainfall (low pressure) areas.

You may use a diagram to help your answer.

(3)

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(g) Evaluate the effectiveness of the methods of response to a tropical cyclone in a named developed country.

(8)

Named developed country .....

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(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

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SECTION B

Development Dynamics

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and use of specialist terminology will be assessed in 2(g).

2 (a) (i) Which of the following is the definition of 'Gross Domestic Product (GDP)'?

(1)

☒ **A** the total value of goods and services produced within a country during one year

☒ **B** the total value of all products imported by a country during one year

☒ **C** the total value of all products exported by a country during one year

☒ **D** the total value of all exports minus the value of imports during one year

(ii) Which **one** of the following is included in the Human Development Index (HDI)?

(1)

☒ **A** the average number of women dying in child birth

☒ **B** the average number of births per woman

☒ **C** the average number of years attending school

☒ **D** the average number of people of working age

(b) Explain how the HDI measures the health of a population.

(2)

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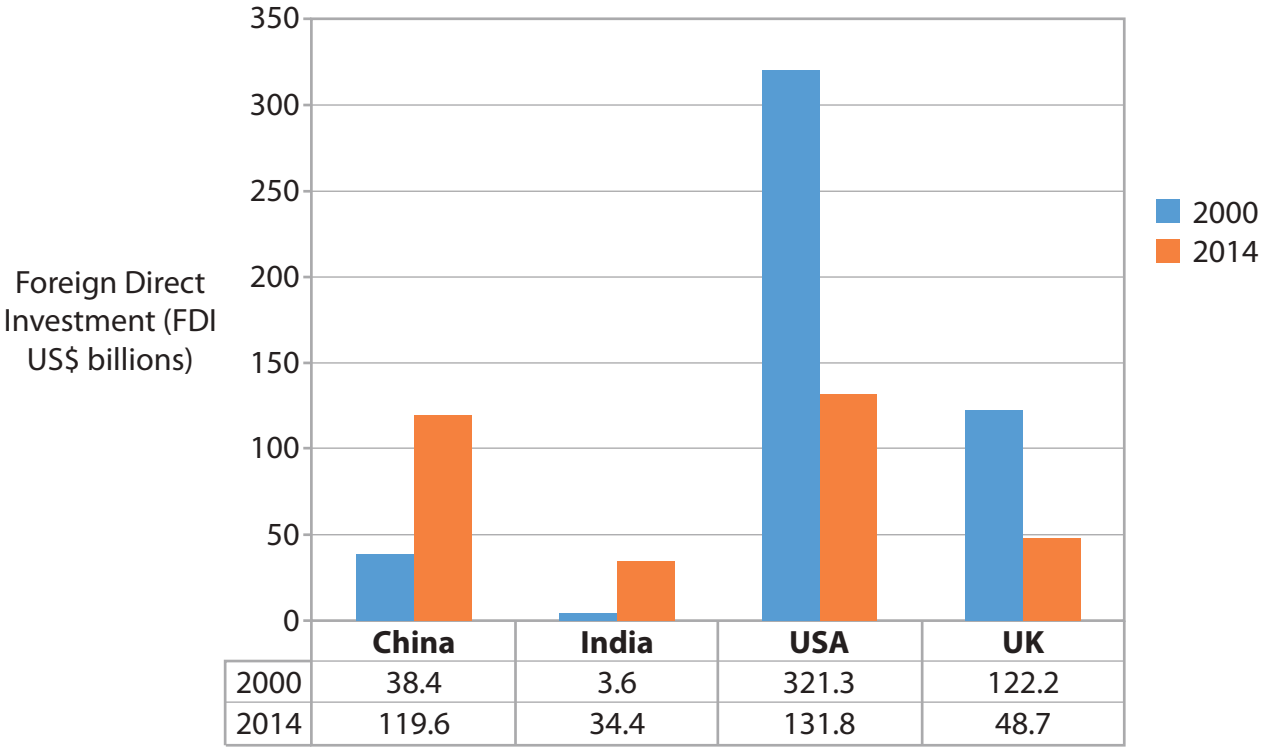
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(c) Explain **one** way in which topography affects economic development.

(3)

(d) Analyse Figure 4.



	China	India	USA	UK
2000	38.4	3.6	321.3	122.2
2014	119.6	34.4	131.8	48.7

Figure 4

FDI received by selected countries between 2000 and 2014

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(i) Calculate the difference between the FDI in China and India in 2014.

(1)

..... US$ billions

(ii) Calculate the percentage increase in FDI in China between 2000 and 2014.
Answer to one decimal place.
Show your working.

(2)

.....%

(e) Explain **one** disadvantage of top-down development strategies.

(3)

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(f) Analyse Figure 5.

	Rural population (millions)	Urban population (millions)	Total population (millions)
1960	550	100	650
1980	805	198	1,003
2000	820	455	1,275
2020 (projected)	650	750	1,400

Figure 5

Changes in the actual and projected rural and urban population of China between 1960 and 2020

(i) For 1960, calculate the ratio of rural population to urban population.

(1)

.....

(ii) Describe another data presentation technique which could be used to show the changing rural and urban populations in China in the table (Figure 5).

(2)

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(iii) Explain **one** negative impact of rapid economic development on human health.

(2)

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(iv) For a named emerging country, explain **two** socio-economic differences between regions.

(4)

Named emerging country .....

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(g) Evaluate the impact of globalisation on the economy of a named emerging country.

(8)

Named emerging country .....

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(Total for spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 2 = 34 marks)

TOTAL FOR SECTION B = 34 MARKS

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SECTION C

Challenges of an Urbanising World

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 (a) State which of the following is the definition of urbanisation.

(1)

- ☒ **A** an increasing number of people living in the suburbs of cities
- ☒ **B** an increasing proportion of people leaving the cities and moving to rural areas
- ☒ **C** an increasing number of people living in city centre locations
- ☒ **D** an increasing proportion of a country's population living in urban areas

(b) (i) State **one** characteristic of informal employment.

(1)

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(ii) Explain **one** reason why informal employment has grown rapidly in some cities.

(2)

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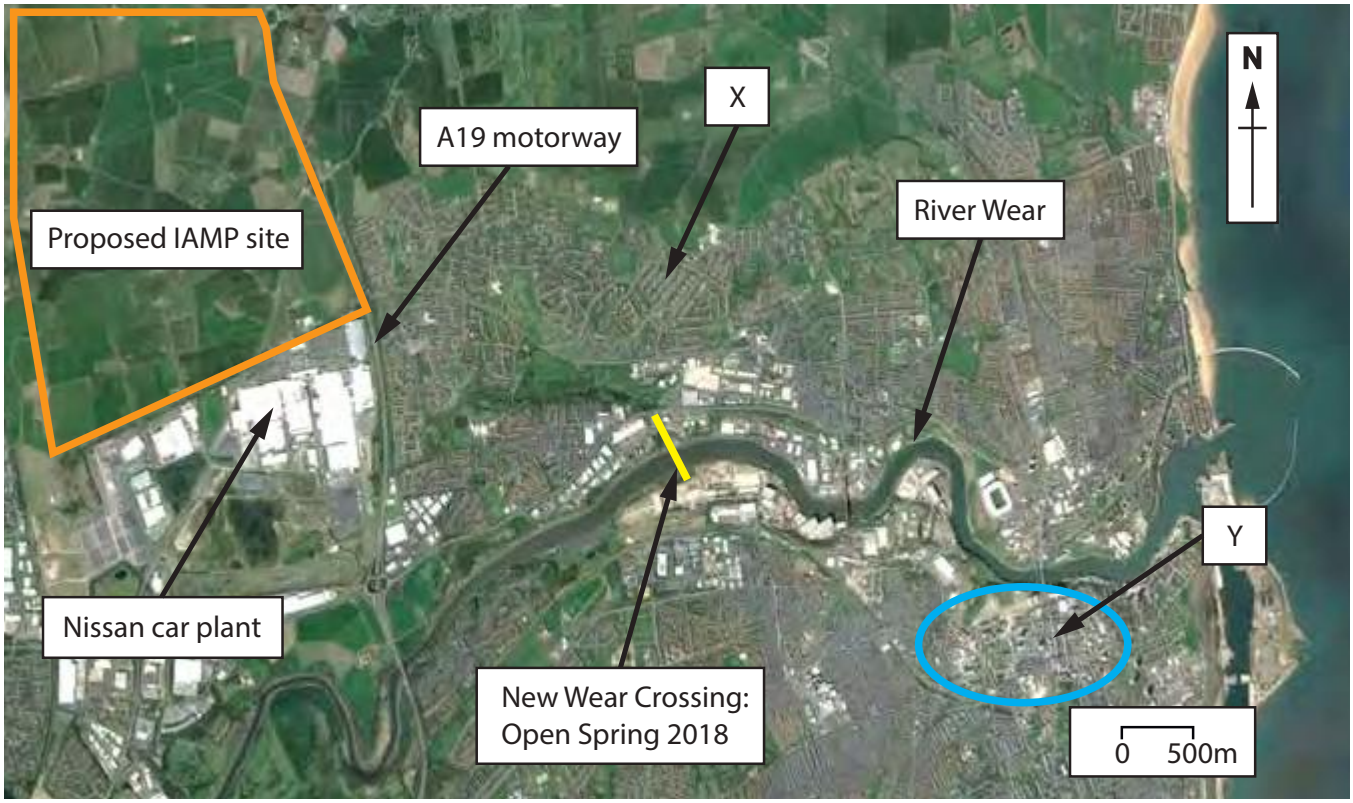
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(c) Study Figure 6.



Key:

IAMP - International Advanced Manufacturing Park

- Sunderland's Central Business District (CBD)

Figure 6

An annotated satellite image of Sunderland showing different land uses and future developments

(i) Identify the main land use found at locations X and Y by completing the table using the list below.

(2)

A Transport
B Agricultural
C Residential
D Commercial
E Industrial

Location	Main land use
X	.....
Y	.....

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(ii) Describe the location of Sunderland's Central Business District (CBD) shown on Figure 6.

(3)

(iii) Suggest **two** factors which may have influenced the choice of site for the proposed International Advanced Manufacturing Park (IAMP) shown on Figure 6.

(4)

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(d) Study Figure 7.

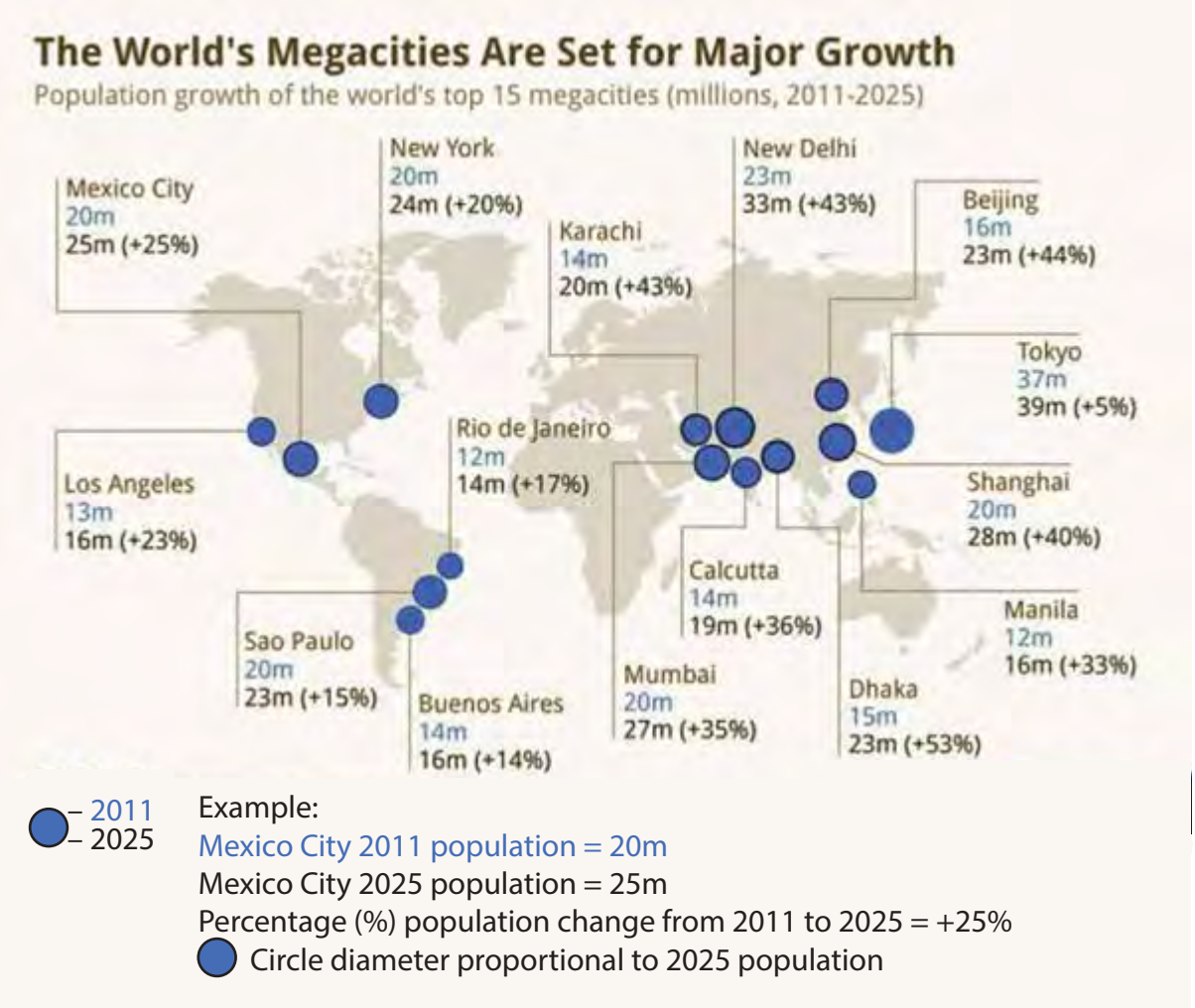


Figure 7

Populations and population growth rate of the world's largest megacities

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(i) Calculate the mean % population growth between 2011 and 2025 in South American megacities.
Answer to one decimal place.
Show your working.

(2)

.....%

(ii) Explain why the rapid growth of megacities shown in Figure 7 may cause social challenges.

(3)

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(e) (i) State **one** reason why the population of megacities is likely to grow rapidly.

(1)

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(ii) For a named megacity, explain why the quality of life varies between different residential areas.

(3)

Named megacity .....

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(iii) For a named megacity, assess the different strategies used to improve sustainability.

(8)

Named megacity .....

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(Total for Question 3 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

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Figure 6 – Map data © 2017 Google

Figure 7 – Source from: https://www.statista.com/chart/1826/population-growth-in-the-worlds-megacities/

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Mark Scheme (Results)

Summer 2019

Pearson Edexcel GCSE
In Geography Spec B (1GB0) Paper 01

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Summer 2019
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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question number	Answer	Marks
1(a)(i)	**B -** August is the wettest month. All other statements are false.	1
1(a)(ii)	12 or 12°C	1
1(b)	Award 1 mark for identifying a factor contributing to aridity and a further mark for explanation. There must be explanation/extension covering the movement of air to gain 2 marks. ● High pressure areas are dry/arid (1). In these areas clouds rarely form (1) ● Arid areas experience high pressure and have low rainfall totals (1) descending air has very little moisture content (1) ● Descending air is compressed and so warms up (1) thus condensation cannot take place (1) ● For clouds to form, air must be rising and cooling (1) this does not occur in arid/high pressure areas (1). ● Rain shadow areas are arid (1) this is because dry air is descending (1). ● Dry prevailing winds can result in aridity (1). Winds which have travelled large distances over land will have little moisture (1) ● Areas which are large distances from the sea are often dry (1) due to winds carrying very little moisture (1) **No credit for simply stating an example of an arid** **area. Accept any other appropriate response.**	2
1(c)(i)	Award one mark for any of the following 1800:7200 or 1800 to 7200 180:720 or 180 to 720 18:72 or 18 to 72 9:36 or 9 to 36 3:12 1:4 or 1 to 4 Note: Reverse answers for example, 4:1 are also valid. **Accept any other appropriate response.**	1

1(c)(ii)	Identifies a type of item uploaded to social media, for example photos / videos. (1) Identifies one or more social media platform(s), for example Facebook. (1) Has idea of sharing information (1) Explains how social media could be used to record the impact of cyclone damage (1) For example: ● Twitter/Facebook/Instagram/Whatsapp (1) could be used to post photographs showing cyclone damage (1). ● Tweets (1) from eyewitnesses detailing impact (1) ● News reports detailing cyclone impact (1) could be shared (1) ● Photos (1) can be shared (1). ● The location of cyclone impacts (1) can be shared (1). **Accept any other appropriate response.**	2

1(c)(iii)	Award one mark for identifying a reason why the level of impact differs and a further two marks for explanation up to a maximum of 3 marks. ● Places have different levels of development (1). More developed areas have more advanced infrastructure (1) which can be very costly to repair(1) ● Different levels of development (1) mean that some locations are able to better forecast tropical cyclones (1) so local people can take measures to secure their properties, minimising economic loss. (1) ● The magnitude of tropical cyclones may differ (1). Some tropical storms have much higher wind speeds/storm surges than others (1) which can lead to greater damage and economic loss (1). ● Levels of storm preparation may vary (1) meaning that in some locations coastal defences may be in place(1) reducing overall economic loss (1). ● Residents of more developed nations (1) often have insurance policies in place (1) contributing to a greater overall economic loss (1). ● In more developed countries (1), levels of preparation may be more advanced (1) such as early warning tracking systems can be in place (1). **Accept any other appropriate response.**	3
1(d)(i)	Award one mark for each comparative statement. ● The highest sea-level projections is 180 cm higher than the lowest projection in 2100 (1). ● In the years immediately after 2020, the highest and lowest projections are similar (1). ● The highest sea level projection increases more rapidly than the lowest projection (1). ● The difference between the highest and lowest projection increases with time (1). **Note: Comparative comments can come from the use of data as is the case in the first bullet.** **Accept any other appropriate response.**	2

1(d)(ii)	Award one mark for each correctly identified reason explaining the range in the predictions and a further mark for explanation up to a maximum of two marks each. Award one mark for the idea that sea levels are rising as a consequence of global warming / ice sheet melt / thermal expansion / climate change. ● Humans may adopt more renewable energy sources (1) which will lead to less global warming and less sea ice melt (1). ● Future rates of economic development are difficult to predict (1) as countries develop they may either reduce or increase their emissions (1). ● Future rates of population growth are uncertain (1) so a reduced rate of growth may lead to less global warming and lower sea level rise (1) ● There could be an increased volcanic activity (1) which may result in lower sea level rise nearer the 20cm lowest projection. (1) ● A rapid increase in fossil fuel use (1) could cause a 200 cm increase (1). ● The process of climate modelling may have inaccuracies (1), it is difficult to make accurate future projections as there are so many variables (1). **Max 3 if no data is used. Only award 1 data** **mark. Accept any other appropriate response.**	4
1(e)	Award one mark for identifying a piece of historical evidence which can be used to reconstruct past climates. Award a further mark for a legitimate explanation. Allow ice core data and tree ring analysis to constitute historical records. ● Ice cores (1) can be analysed to determine the amount of carbon dioxide in them(1) ● Historical records such as paintings/diary entries (1) may inform about frost fairs on the Thames/ difficult growing conditions (1) ● Tree rings (1) can be examined with greater thickness indicating better growing periods/higher temperatures (1) ● Records of sea level changes (1) can show the link between	2

	warmer temperatures and ice melt (1) ● Animal fossils (1) which no longer live in certain areas can indicate higher or lower temperatures (1) ● U-Shaped valleys (1) show evidence of previous glaciation (1). ● Records of carbon dioxide fluctuations (1) can indicate inter-glacials or glacials (1). ● Rock type / geology can be studied (1) sediments deposited by shallow seas indicate changes in sea level (1) **Accept any other appropriate response.**	

1(f)	**B** - on a divergent boundary All other answers are evidently false	1
1(g)	Award one mark for correctly identifying a basic difference between volcano type at convergent and divergent boundaries and a further two marks for explanation of that difference. ● At divergent boundaries the volcanoes are less steep (1), this is due to the low viscosity/runny lava (1) which travels a greater distance before it solidifies (1). ● Convergent boundary volcanoes are more cone shaped whereas divergent boundary volcanoes are flatter/shield shape (1) because divergent volcanoes gave faster flowing / less viscous lava (1) because it has a lower gas content (1). ● The andesitic lava at convergent boundaries erupts violently (1) due to its high-gas content (1) and its high viscosity (1). ● At divergent boundaries volcanic explosivity is lower (1), due to the magma having a lower gas content (1) and it being less viscous (1). ● Convergent volcanoes are made of layers of ash and lava whereas divergent ones are made entirely of cooled lava (1). This is because convergent boundary volcanoes are more explosive (1) whereas at divergent boundaries magma easily escapes through fissures (1). Note: Answers don't need to refer to a specific plate boundary. **Accept any other appropriate response.**	3

Question	Indicative Content	
1(h)	**AO2 (4 marks) / AO3 (4 marks)** Content will vary depending on the chosen case tectonic hazard and the examples used. **AO2 (4 marks)** **Earthquake** ● In Nepal, a primary impact of the earthquake was that an avalanche was triggered on the slopes of Everest killing 17 people and injuring many more who were at base camp at the time of the earthquake. ● In Nepal, hundreds of thousands were made homeless as many villages were destroyed by the earth movement. ● Landslides were responsible for many deaths and disruption of transport infrastructure. ● Liquefaction led to building collapse in Kathmandu especially of older buildings ● In Haiti, poor construction methods led to the damage of over 100,000 of buildings. ● In Haiti, the main prison was destroyed and 4000 inmates escaped. ● In Haiti, disease was a significant secondary impact with the cholera outbreak leading to many additional deaths. ● In Haiti, disease spread quickly in refugee camps. ● 1 in 5 people in Haiti lost their jobs and only source of income due to buildings collapsing. **Volcanic Eruption** ● In Lake Nyos, Cameroon poisonous gases were emitted which posed a danger to living organisms. ● In Montserrat, the pyroclastic flow engulfed several villages and buried the capital Plymouth.	8

	● Snow topped volcanoes can have their ice melted by an eruption causing lahars which can destroy villages as was the case following the Nevado del Ruiz eruption. ● Following the eruption of Mt. Nyiragongo, DRC half a million people fled into neighbouring Rwanda. They lived in crowded refugee camps where cholera became a serious threat to health. ● Following the eruption of Mt. Nyiragongo, looting became a serious problem in the nearby city of Goma. ● Occasionally volcanic eruptions trigger tsunamis as was the case with Krakatoa. **Expect students to make the distinction between the primary and secondary effects of their chosen earthquake or volcano to access 4 marks in AO2.** **A03 (4 marks)** ● 'Importance' can be assessed in terms of economic costs, deaths and injuries. ● Assessment about the relative significance of primary or secondary impacts are worse. ● Primary and secondary impacts in emerging/developing nations are often magnified by poor levels of preparation and the lack of finances to implement an effective disaster response. ● Long term impacts on economic development are often significant. ● Impacts can be magnified by the lack of preparedness, neglect, corruption and poor governance. ● International aid agencies may not always be effective in addressing secondary impacts ● Assessment might include the relative significance of social economic and environmental impacts.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. ● A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Question number	Answer	Marks
2(a)(i)	**A** The average number of children born per woman (in a country). **B** refers to the death rate, **C** refers to a young dependent population and **D** refers to the infant mortality rate.	1
2(a)(ii)	Award one mark for correctly identifying an economic indicator of development and a further mark for an accurate explanation. ● GDP or Gross Domestic product (1) measures the value of goods and services produced (1) ● GDP per capita (1) measures the value of goods and services per person (1) ● GNI or Gross National Income (1) measures the total income of a country (1). ● The HDI (Human Development Index) includes the measurement the GNI (or GDP) (1) this gives an indication of the wealth of a country (1) ● Average incomes (1) can reflect the type of economic activity in the country (1) ● PPP (purchasing power parity) (1) reflects the cost of living in different countries (1). ● The percentage of people in different economic sectors can be used (1). A higher percentage in primary employment often reflects less well paid forms of economic activity (1) **Accept any other appropriate response.**	2
2(b)(i)	**C** Australia Australia has a score in the 80-89 bracket indicating it is 'more clean' than the other countries.	1

2(b)(ii)	Award one mark for each correctly stated disadvantage of choropleth maps. ● Map assumes the whole region/area has the same value, but there could be variations (1). ● Data about individual countries is given as a range as opposed to an exact figure (1). ● The maps show sudden changes at boundaries/borders – this often exaggerates differences (1). ● The interval/class sizes need to be carefully chosen (1). ● Colour blindness makes interpretation difficult (1). ● The map is from 2016 therefore data may be outdated (1). ● Similar shadings are difficult to tell apart (1) ● Some places are lacking data (1) **Accept any other appropriate response.**	2
2(b)(iii)	Award one mark for identifying a link regarding how systems of governance can lead to inequalities / variations in levels of development. ● Open economic policies (1) encourage foreign investment which leads to faster development (1) which benefit some groups e.g. those who are employed (1). ● Colonialism (1) resulted in colonies being exploited for the economic gain of colonial powers (1) with unequal trading relationships established (1). ● Gender bias within governments (1) may result in widening inequalities between men and women (1) which leads to pay differences (1). ● Government policy which focus on development in specific regions (1) increases inequalities between wealthy / poor regions (1) for example the investment in new infrastructure in urban areas (1) ● Racial bias within governments (1) negatively effects certain ethnic groups (1) which has led to the persecution of people for their religion (1).	3

	● High levels of corruption often correspond to low levels of development (1). In such countries, public finances may not be used effectively (1) limiting spending on public services such as schools and hospitals (1). ● In countries where corruption is high, government officials may make poor decisions regarding public finances (1). A lack of investment in health services (1) may result in lower life expectancies (1). ● Countries where governments have invested in education/healthcare tend to develop faster (1). A healthy/educated population encourages investment (1) and the workforce more able to contribute to economic growth (1). **Accept any other appropriate response.**	
2(c)(i)	10-14 age group (1)	1
2(c)(ii)	19.1 or 19.1%	1
2(c)(iii)	Award one mark for each comparative point made. ● In 2019 the population pyramid has a wide base whereas by 2050 the base has narrowed (1) ● In 2050 there are 0.2% more of the population aged over the age of 90. ● In 2019, 9% of the Indian population is in the 0-4 age group whereas by 2050 this is forecast to fall to 6.2% by 2050 (1) ● It might be inferred that by 2050 life expectancy is higher than in 2019. (1) ● Allow the manipulation of data to score one mark, for example: In 2050, 2.8% less of the population is aged 0-4 (1). ● Both pyramids have a fairly equal gender split. (1) ● In 2050 the median age has risen (1) ● In 2050 there are a greater % of people in older aged groups (1) ● By 2050 there are a greater % of people in middle-aged groups (1) ● 2019 has a higher birth / death rate than in 2050. (1)	3

	Note: Award marks for comparative sentences and not descriptive statements. **Note: Do not credit data lifts directly from the resource** **Accept any other appropriate response.**	

2(d)	Award one mark for identifying a disadvantage of intermediate technology with a further mark for extension. Credit problems with specific examples of intermediate technology. ● Intermediate technology does not often benefit a large number of people (1) so may not have much of a positive impact on an area's quality of life (1). ● Micro-hydroelectricity can be an unreliable form of power (1) because of variations in rainfall. (1) ● Intermediate technology often does not have direct government support (1), therefore may incur financial difficulties (1). ● Intermediate technology often still involves some cost / some can't afford it (1) which means not all of the community will be able to benefit (1). ● Intermediate technology can be unreliable (1) requiring regular repairs (1). ● Intermediate technology is not well suited to address issues at a national scale (1) such as transport and communication infrastructures (1) **Accept any other appropriate response.**	2
2(e)	Award one mark for identifying a benefit of FDI and a further extension mark. ● FDI increases the number of jobs (1) which leads to an increase in tax revenue for the government (1). ● FDI creates jobs (1) which, in turn, leads to the population learning new skills (1). ● TNCs invest in local infrastructure (1) which can benefit existing local industries (1). ● FDI may introduce new technologies (1) that can help further development for 'local' businesses. ● FDI leads to the multiplier effect (1) leading to further economic development (1). **Accept any other appropriate response.**	2

2(f)	Award one mark for identifying a negative impact of rapid economic growth and a further mark for explanation of how different age groups are affected up to a maximum of two marks. ● Air pollution (1) leads to breathing problems amongst the elderly / young people (1) ● Often there are not enough jobs leading to unemployment for young people (1) as a consequence of rapid rural to urban migration (1) ● Rapid rural to urban migration (1) leads to an ageing population in rural areas who have no-one to look after them (1). ● TNCs in emerging countries are known to employ young children resulting in them not attending school (1) and their education suffering as a consequence (1). ● Rural to urban migration (1) leads to an inactive ageing population in rural areas who are often economically inactive (1) **Accept any other appropriate response.**	4

Question	Indicative Content	
2(g)	**AO2 content will vary depending on the chosen case emerging country and the examples used.** **AO2 4 marks / AO3 4 marks** **A02 (4 marks)** ● China has experienced extremely rapid economic growth, seeing its GDP overtake that of the USA in 2014. ● China is having an increasing political role in the South China Sea, an important sea trading route in the region. ● China has assumed the dominant position in the East Asian region, overtaking that of USA which has seen its influence in the region diminish as that of China rises. ● China has signed many bilateral trade deals with South-Eastern Asian neighbours promoting mutual development as neighbours see China as a key trading force in the region. ● China has signed trade deals with Vietnam after many years of conflict and has become the country's main trading partner. ● China is having an increasing influence in geopolitical tensions on the Korean peninsula. ● From 1971 onwards, China has held a permanent seat affording it veto power on the UN Security Council. ● China is a member of the G20 and a key figure in the formation of international economic policy. ● India's relationships with its neighbours are tense. India and Pakistan lay claim to Kashmir and both have troops stationed in the area. ● With continued rapid economic development, India is becoming an increasing consumer of water. Indian river diversion projects are taking water away from neigbouring Pakistan. ● India wishes to become a member of the UN Security Council which will see its international role develop further. ● India, China and Pakistan are all nuclear powers. The nations have a key role to play in the area maintaining peace.	8

	● India is a member of the G20 and is a key trading partner with the EU and the USA. ● India has an increasingly important role to play in tackling global climate change and is a major investor in renewable technologies. ● India is playing an important role in the space race and has launched satellites belonging to USA and EU countries. **AO3 4 marks** ● Assessment that whereas China / India has become a major regional and global economic force, its cultural and political influence have not developed at the same pace. ● Assessment regarding the increased tension in relationships with their neighbouring countries as China / India exerts its influence. ● Assessment regarding China's increasing political influence in Africa compared to its Western political influence. ● Assessment that China's political/cultural influence will continue to grow in the future as economic development continues. ● Assessment regarding India's future role on the regional /international stage as it continues to develop economically. ● Assessment regarding the importance of India's role in maintaining regional peace / tackling global issues such as climate change. ● Overall evaluation regarding the extent to which China's international role has changed as it has developed.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* ● Learners write nothing. ● Learner's response does not relate to the question. ● Learner's achievement in SPaG does not reach the threshold performance level, for example severe errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance*
		● Learners spell and punctuate with reasonable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a limited range of specialist terms as appropriate.
SpaG 2	2-3	*Intermediate performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a good range of specialist terms as appropriate.
SpaG 3	4	*High performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with effective control of meaning overall. ● Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
3(a)(i)	Award 1 mark for the African line correctly marked at 58% (on the line below the 60% line – each line represents 2%).	1
3(a)(ii)	B – 57%. All others are incorrect responses.	1
3(a)(iii)	Award one mark for identifying a reason why urbanisation rates are forecast to increase and a further mark for explanation. ● Jobs/health care/education are significant pull factors to urban areas (1) leading to rapid rural to urban migration (1). ● Large rates of natural increase are occurring in urban areas (1), this is due to large percentages of young people in large cities (1). ● Commercial agriculture is displacing subsistence farmers leading to rapid (1) leading to rapid rural to urban migration (1). **Accept any other appropriate response.**	2

3(b)	**C** and **E** are correct answers. They are characteristics of bottom-up development strategies. A is incorrect. It is a characteristic of a top-down development strategy. B is incorrect. It is a characteristic of a top-down development strategy. D is incorrect. It is a characteristic of a top-down development strategy.	2
3(c)(i)	Allow one mark for the candidate demonstrating how to work out percentage increase and then another mark for the correct answer. Difference between original 1991 and 2016 figure = 9.7. 9.7/9.4 = 1.0319 1.0319 x 100 = 103.19 (1) 103.2% increase. (1)	2
3 (c)(ii)	Award one mark for identifying areas of spatial growth in Delhi and further marks for expansion such as use of direction and scale. Accept responses that focus on 'local' areas of Delhi. ● Significant expansion has occurred to the South (1) in a narrow strip 18km (1) south of the dam (1) ● Delhi has expanded East (1) of the Yamuna River (1), with its outer limits now extending for 25km (1). ● Delhi is expanding to the South East (1), with its limit now extending 25km (1) past the Okhla dam (1). ● Delhi has expanded to the West (1) either side of the Najafgarh Drain (1) in an approximately 30km strip (1). ● Delhi has more than doubled in size (1). The area around the International Airport has become more urban (1) with rural areas become more infrequent (1). **Accept any other appropriate response.**	3
3(c)(iii)	Award 1 mark for identifying a challenge from Figure 8b faced by the population of Delhi as a consequence of rapid urban growth a further mark for explanation of the challenge. **Answers MUST be applicable to Figure 8b.**	4

	● Rural to urban migration (1) will result in housing shortages (1) ● The population of the city has increased by 9.7 million in 15 years (1) this has led to a huge increase in the amount of waste produced which often ends in landfill creating fire risk/health problems (1). ● A rapid increase in the population of the city (1) will result in increased pollution of water sources such as the Yamuna River (1). ● Increased traffic congestion will result in increased levels of pollution (1) impacting human health (1). ● A large percentage of the population live in slums (1), which lack basic sanitation facilities (1) ● Delhi has the world's worst air pollution (1), this creates health related problems (1). **Accept any other appropriate response.**	
3(d)(i)	3.8%. Allow + or - 3.8%	1
3(d)(ii)	Award 1 mark for establishing a reason why planning regulations affect the growth of cities and a further mark for explanation. ● Planning regulations can restrict urban growth (1) as planning permission is often difficult to obtain (1). ● Planning regulations can protect areas (1) limiting the urban expansion of cities (1). ● Planning regulations can restrict the expansion of cities (1) encouraging new developments within existing city boundaries (1) ● Planners in developed countries prefer to permit new housing developments on brownfield rather than greenfield sites (1) this restricts the outward growth of some cities into surrounding rural areas (1). ● In the 50s and 60s, planners developed new estates on the edges of towns leading to growth (1). People were rehoused from inner city slum areas (1). ● Planners in Mumbai are replacing slum housing with high-rise developments (1) which is leading to an increasing population density in inner city areas (1). **Accept any other appropriate response.** **Note: The idea of spatial or population growth must be addressed for 2 marks.**	2

3(e)	Award one mark for a cause of deindustrialisation and a further mark for explanation of the reason. ● De-industrialisation can be caused by competition from overseas (1) with it being cheaper to manufacture products in developing/emerging economies (1). ● De-industrialisation can be caused by decentralisation (1) as industries move out of unfavoured inner-city locations to the rural-urban fringe (1). ● Changing production methods may reduce labour force (1) allowing movement out of traditional manufacturing regions (1) ● Cheaper labour costs overseas (1) resulting in industries relocating overseas/offshoring (1). ● The growth of tertiary / quaternary industries (1) can lead to jobs in manufacturing becoming less attractive (1). ● Cheaper imports from overseas (1) have made UK industries less competitive (1) **Accept any other appropriate response.**	4

3(f)	**AO2 (4 marks) / AO3 (4 marks)** **Answer depends on the megacity chosen.** **AO2 (4 marks)** ● Top-down approaches involve government or external groups making key decisions with varying levels of consultation the local population. ● Top-down development schemes are large and therefore can benefit greater numbers of people than more small-scale bottom-up schemes. ● Top-down development schemes are often expensive involving the country/city/ region incurring significant debt as a consequence of loans. ● Loans may have conditions attached to them resulting in key political decisions being made by external agencies. ● Details of the social/economic/environmental advantages/disadvantages of top-down schemes in the chosen megacity. **AO3 (4 marks)** ● Success can be evaluated in terms of economic, social, political and environmental outcomes depending on the strategy. ● There may be tensions between outcomes with, for example, some economic gains but at high social costs (as with rehousing schemes) ● Assessment as to whether the advantages outweigh the disadvantages substantiated by evidence. ● Elements of a cost-benefit analysis where advantages and disadvantages are compared and subsequently weighted/ranked.	8

	● Assessment might address the long-term sustainability of a strategy. Whereas top-down projects have huge costs, the subsequent benefits can outweigh the initial costs. ● Assessment regarding the overall environmental sustainability both in the short-term and longer-term. ● Evaluation should offer an overview of 'success' of schemes. **Accept any other appropriate responses**	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Tuesday 21 May 2019

Afternoon (Time: 1 hour 30 minutes) | Paper Reference **1GB0/01**

Geography B

Paper 1: Global Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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SECTION A

Hazardous Earth

Answer ALL questions in this section.

Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Study Figure 1 which shows a climate graph for Timbuktu, Mali located 16°N of the equator.

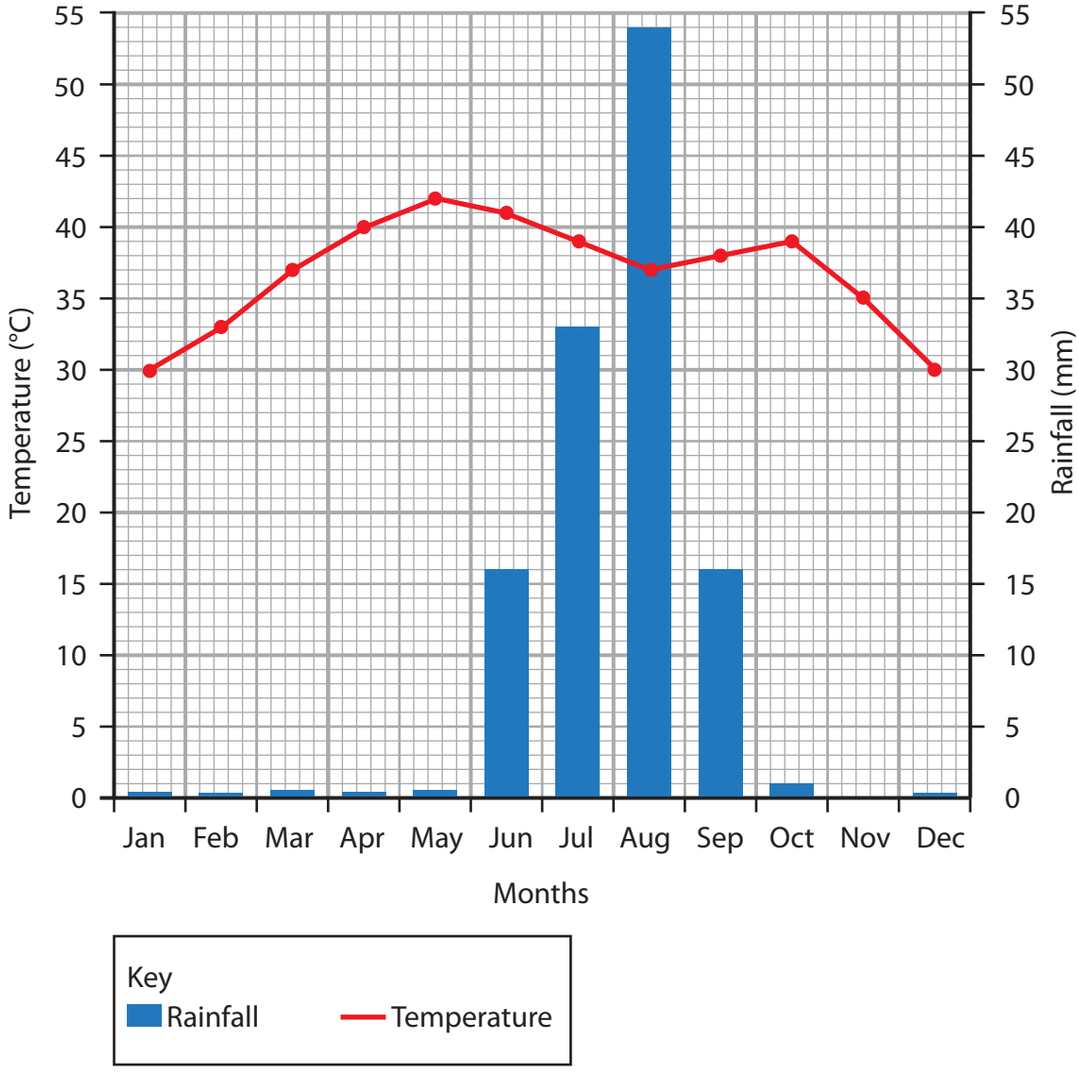


Figure 1

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(i) Identify which **one** of the following describes Timbuktu's climate.

(1)

- ☒ **A** Temperature is highest in November
- ☒ **B** August is the wettest month
- ☒ **C** October is the driest month
- ☒ **D** Temperature decreases from January to May

(ii) Calculate the annual temperature range in Timbuktu.

(1)

..... °C

(b) Explain **one** reason why some areas are arid (have low rainfall).

(2)

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(c) Analyse the data in Figure 2.

Name of tropical cyclone	Location and date	Economic cost (US$ billions)	Number of deaths
Hurricane Katrina	Caribbean / USA August 2005	108	1,800
Typhoon Haiyan	South East Asia November 2013	3	7,200

Figure 2

Selected data for two tropical cyclones

(i) Calculate the ratio of the number of deaths between the two tropical cyclones.

(1)

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(ii) Describe how social media could be used to record the impact of a tropical cyclone.

(2)

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(iii) Explain **one** reason why the economic cost of tropical cyclones varies.

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(d) Study Figure 3 which shows four projections about sea level rise from 2020 to 2100.

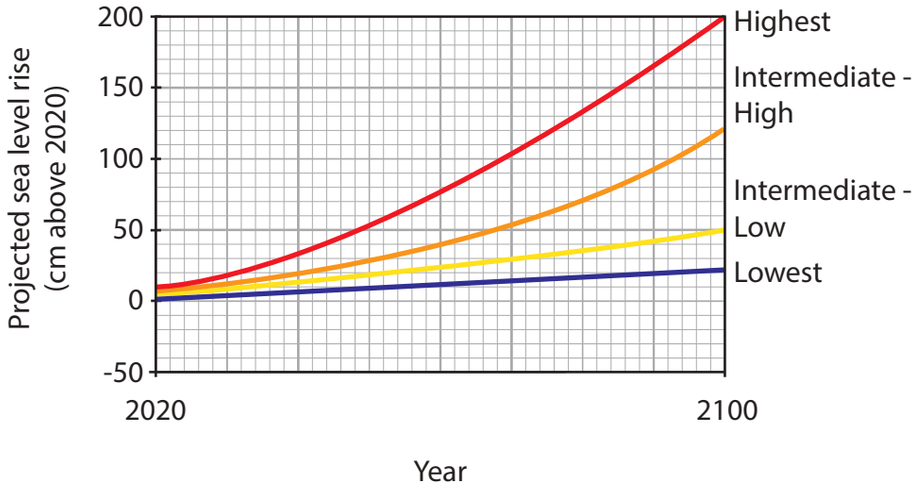


Figure 3

(i) Compare the highest and the lowest sea level projections.

(2)

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(ii) Using data from Figure 3 explain **two** reasons for the range of projections shown.

(4)

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(e) Explain **one** way in which historical records provide evidence of past climate change.

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(f) Study Figure 4 which shows Iceland's location on the Mid-Atlantic Ridge.

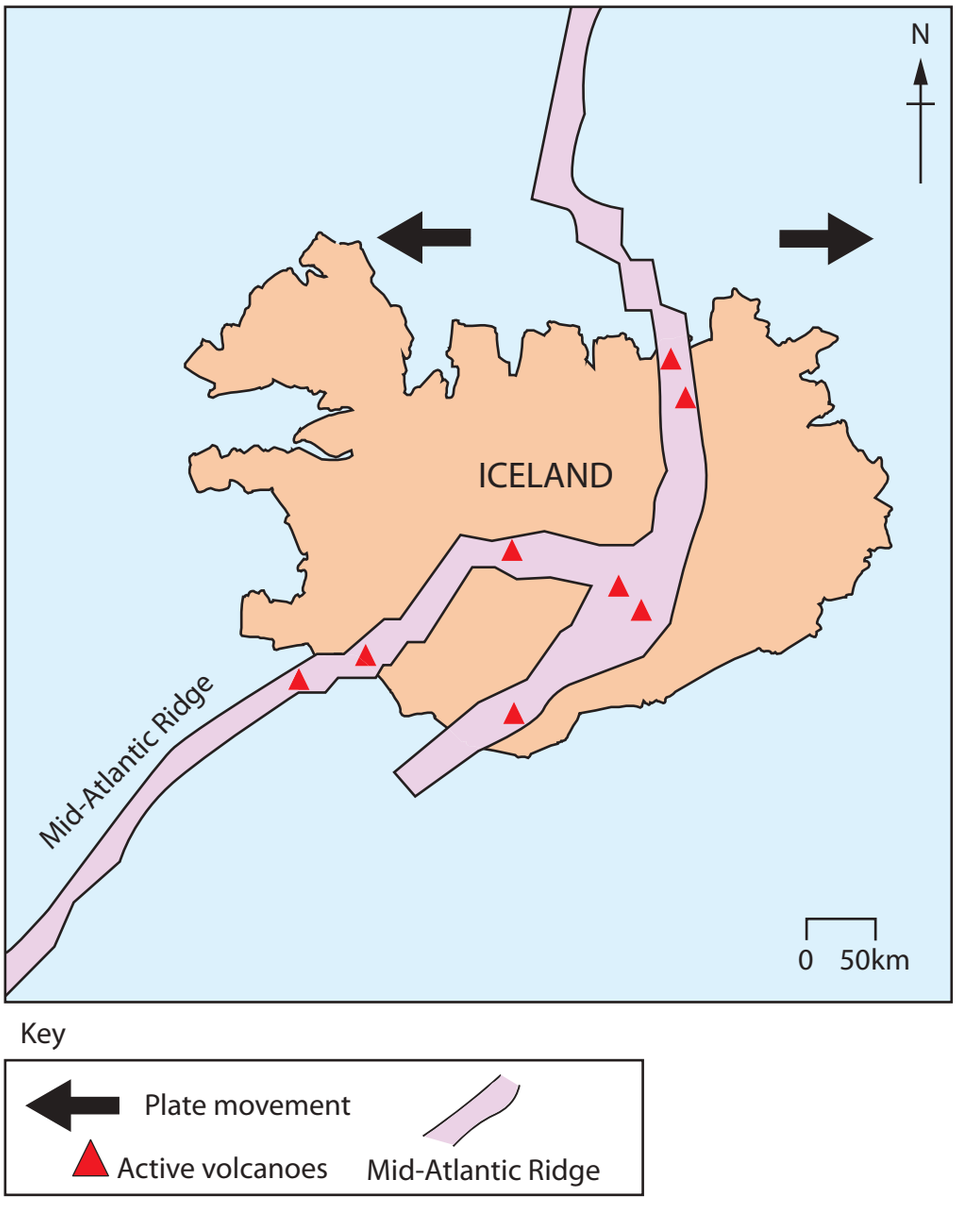


Figure 4

Identify which **one** of the following is the best description of Iceland's tectonic location.

(1)

- ☒ **A** on a convergent boundary
- ☒ **B** on a divergent boundary
- ☒ **C** on a continental plate
- ☒ **D** on a conservative boundary

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(g) Explain **one** difference between the type of volcanoes found at divergent and convergent plate boundaries.

(3)

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(h) Assess the importance of the primary and secondary impacts of **either** earthquakes **or** volcanoes in an emerging **or** developing country.

(8)

Named emerging or developing country .....

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(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

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SECTION B

Development Dynamics

Answer ALL questions in this section.

Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and the use of specialist terminology will be assessed in 2(g).

2 (a) (i) Identify which **one** of the following is a definition of **fertility rates**.

(1)

- ☒ **A** The average number of children born per woman (in a country)
- ☒ **B** The number of deaths per 1000 people in a year
- ☒ **C** The percentage of children in a country under the age of 15
- ☒ **D** The number of children per 1000 live births who die before their first birthday

(ii) Explain **one** way in which economic development is measured.

(2)

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(b) Study Figure 5 which is a choropleth map showing an index of political corruption, 2016.

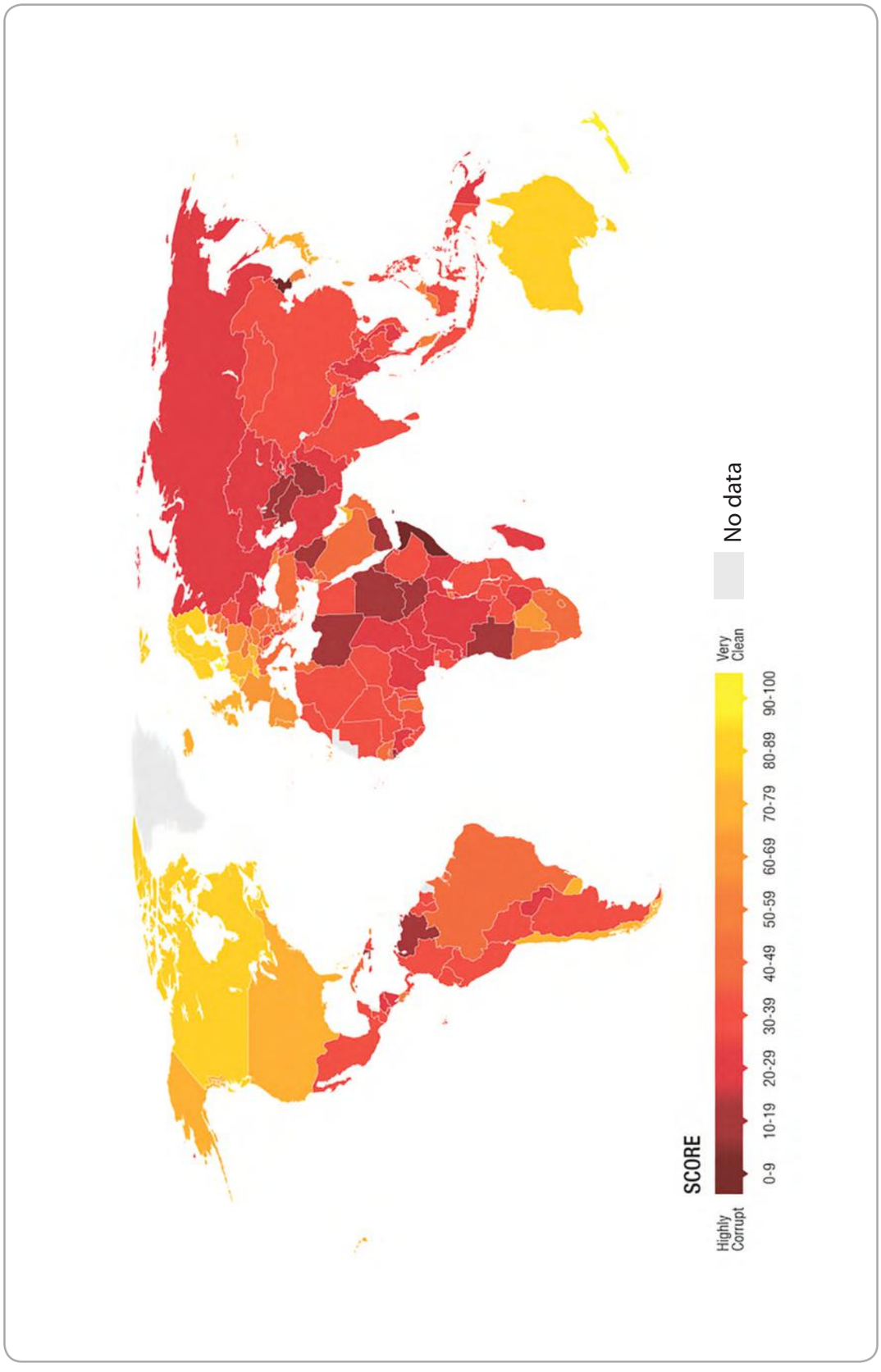


Figure 5

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(i) Identify which **one** of the following countries is the least corrupt.

(1)

- ☒ **A** Russia
- ☒ **B** China
- ☒ **C** Australia
- ☒ **D** India

(ii) Figure 5 is a choropleth map. State **two** disadvantages of this method of data presentation.

(2)

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(iii) Suggest **one** way in which systems of governance can cause inequalities.

(3)

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(c) Analyse Figure 6a and Figure 6b which show the population pyramid of India for 2019 (Figure 6a) and the projected population pyramid for 2050 (Figure 6b).

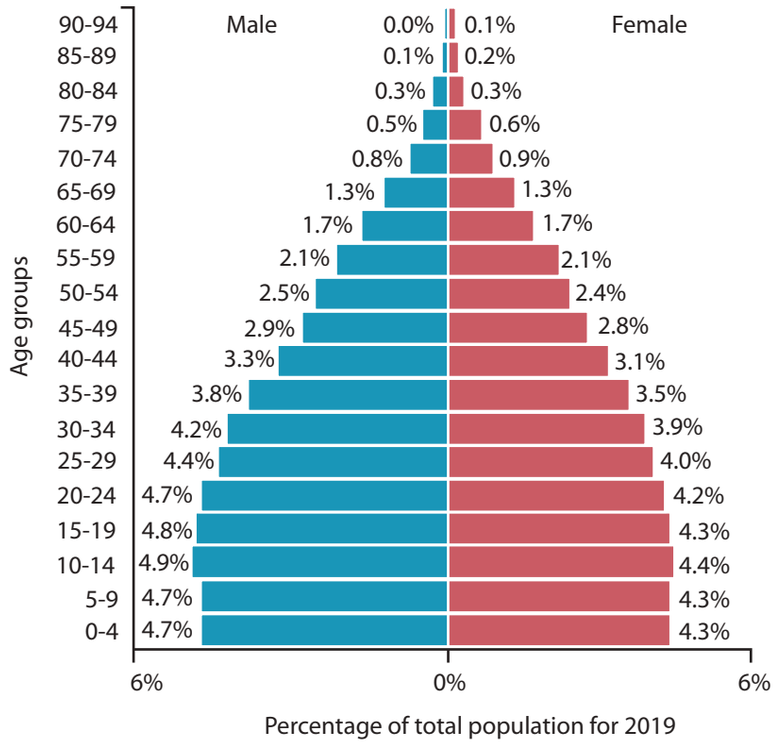


Figure 6a

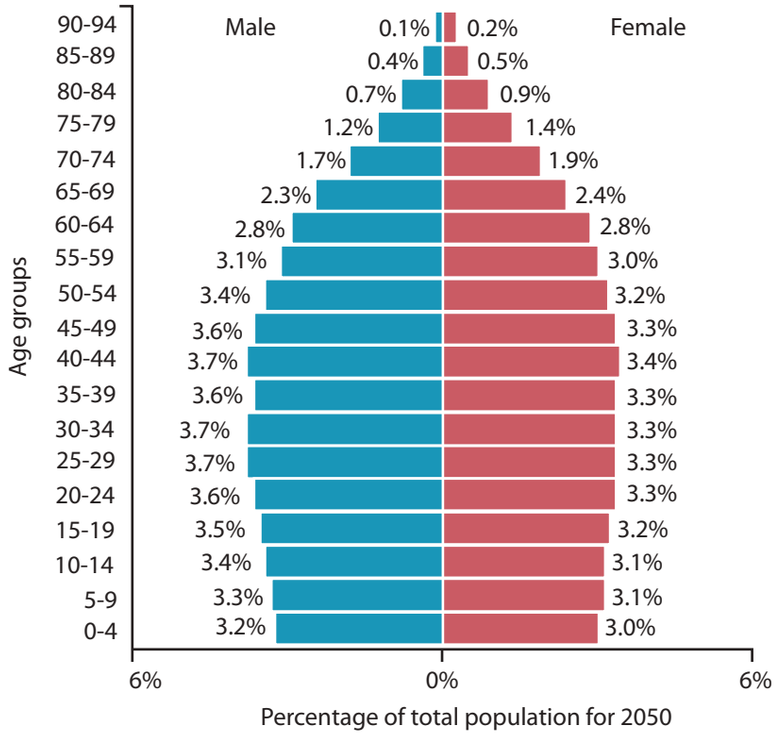


Figure 6b

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(i) Identify the age group with the highest population % in 2019.

(1)

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(ii) Calculate the total percentage of young dependents (0 to 14) in 2050.

(1)

..... %

(iii) Compare these population pyramids.

(3)

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(d) Explain **one** disadvantage of intermediate technology.

(2)

(e) Explain **one** way in which high levels of Foreign Direct Investment (FDI) might benefit an emerging country.

(2)

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(f) Explain **two** negative impacts of the rapid economic development of an emerging country on different age groups.

(4)

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(g) For a named emerging country, assess the extent to which economic development has changed its international role.

(8)

Named emerging country .....

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(Total for spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 2 = 34 marks)

TOTAL FOR SECTION B = 34 MARKS

SECTION C

Challenges of an Urbanising World

Answer ALL questions in this section.

Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 (a) Study Figure 7 which shows projected global urbanisation trends, 2020 - 2050.

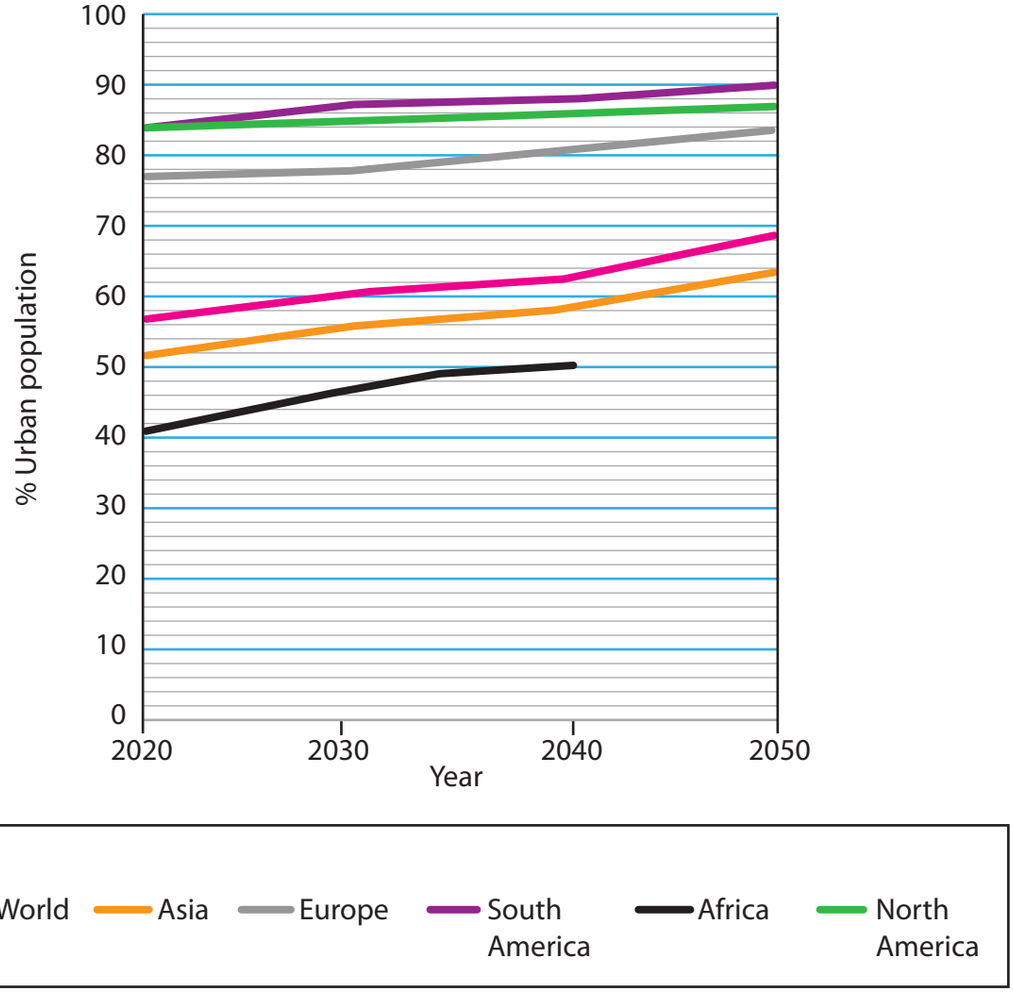


Figure 7

(i) Between 2040 and 2050, the urban population of Africa is predicted to rise to 58%. Plot this information on Figure 7.

(1)

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(ii) Identify the percentage of the world's population living in urban areas in 2020.

(1)

- ☒ **A** 47
- ☒ **B** 57
- ☒ **C** 67
- ☒ **D** 77

(iii) Explain **one** reason why the percentage of the world's urban population is projected to increase.

(2)

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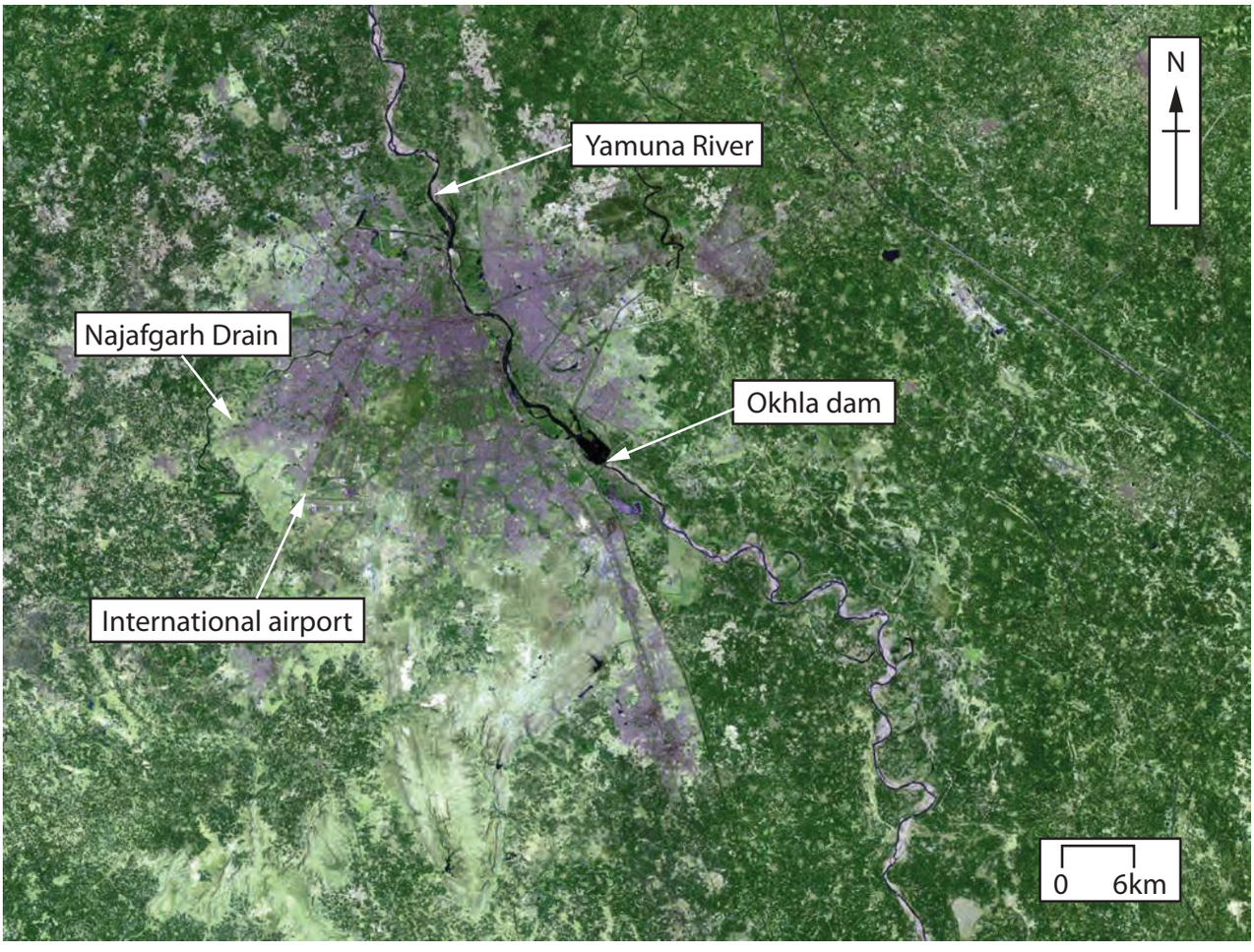
(b) Identify **two** characteristics of bottom-up development strategies intended to make megacities more sustainable.

(2)

- ☒ **A** Projects funded by national governments
- ☒ **B** Large-scale, expensive projects funded by non-governmental organisations
- ☒ **C** Projects making use of cheap local materials, employing local people
- ☒ **D** Projects benefitting the whole country
- ☒ **E** Small-scale, low-cost projects where communities are involved in the decision making

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(c) Study Figures 8a and 8b which show satellite images of Delhi in 1991 (Figure 8a) and in 2016 (Figure 8b).



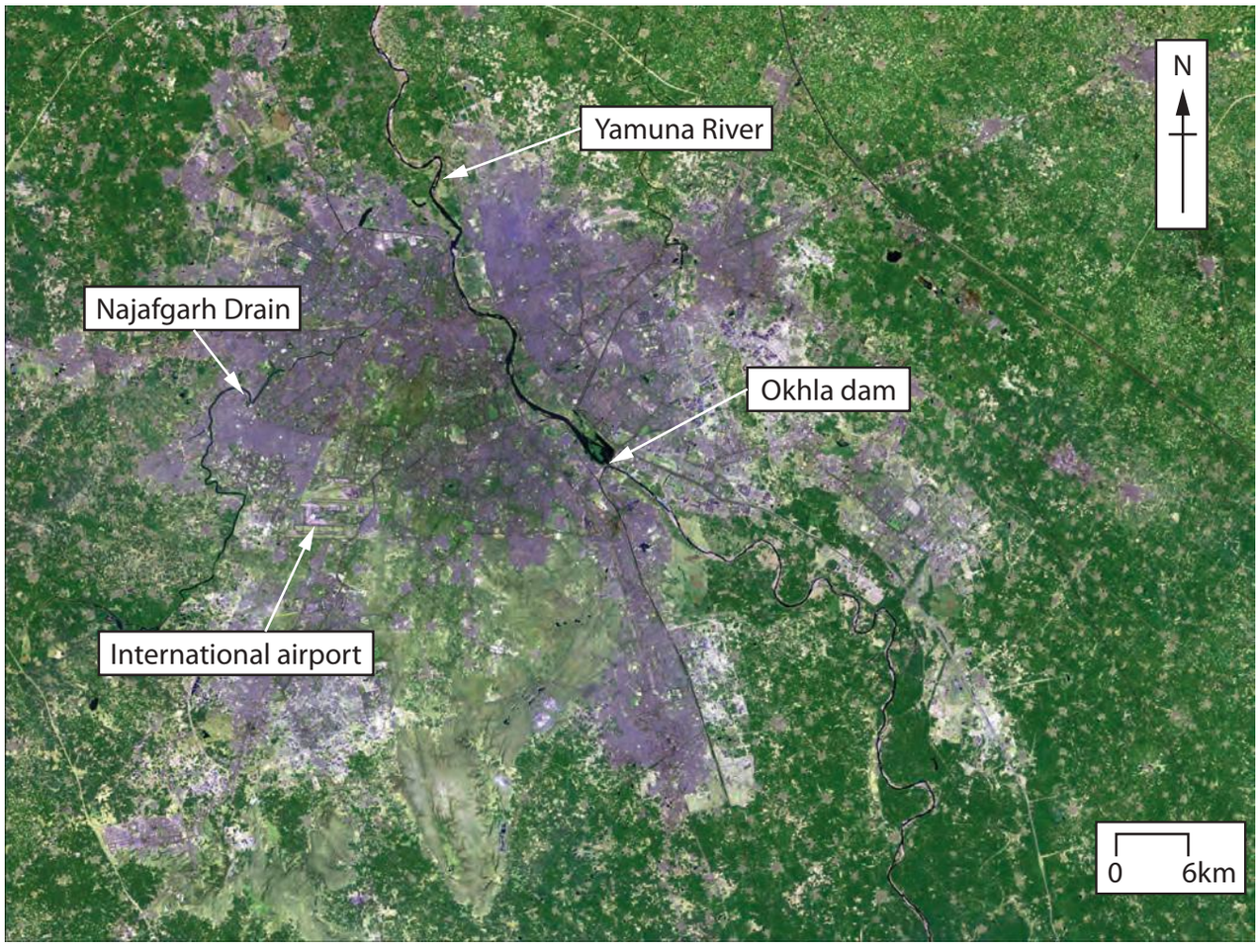
Land use in Delhi in 1991

Highly urban — Highly rural

Total population: 9.4 million

Figure 8a

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Land use in Delhi in 2016

Highly urban — Highly rural

Total population: 19.1 million

Key facts about Delhi (2016)
- Total population: 19.1 million
- In 2016 Delhi was declared the city with the world's worst air pollution.
- 52% of Delhi's population live in slums.
- Delhi produces 9,000 tonnes of solid waste per day.

Figure 8b

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(i) Calculate the percentage population increase of Delhi from 1991 to 2016.

Answer to **one** decimal place. Show your working.

(2)

..... %

(ii) Using Figures 8a and 8b, describe the growth of urban land use in Delhi between 1991 and 2016.

(3)

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(iii) Using Figure 8b, explain **two** ways that rapid urban growth creates challenges for people living in megacities.

(4)

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(d) Analyse Figure 9 which shows the percentage population change in selected US cities, 2013 and 2014.

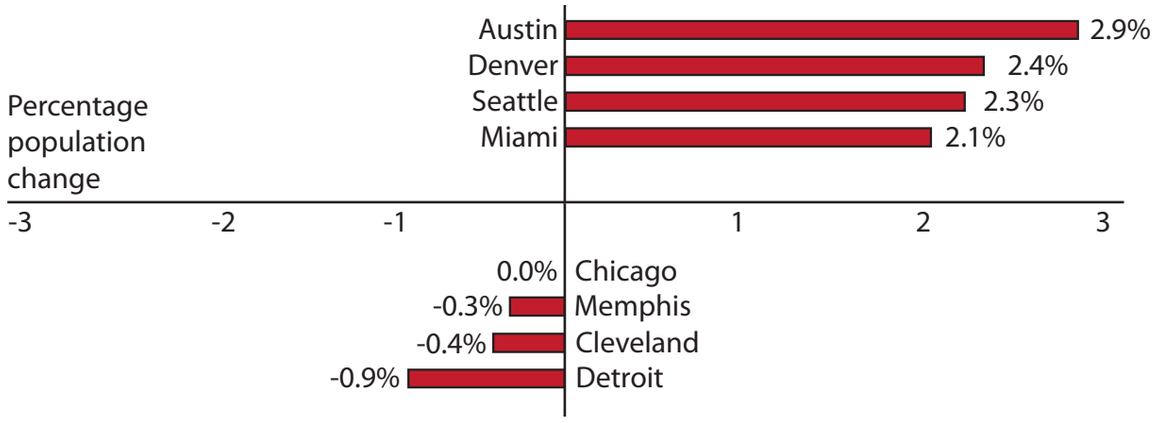


Figure 9

(i) Calculate the difference in percentage population change between Austin and Detroit.

(1)

..... %

(ii) Explain **one** reason why planning regulations can affect the growth of cities.

(2)

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(e) Explain **two** reasons why de-industrialisation may occur.

(4)

1 .....

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(f) For a named megacity, evaluate the success of different top-down development strategies.

(8)

Named megacity .....

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(Total for Question 3 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

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Figure 5 © Transparency.org

Figure 8a and 8b sourced from:
https://climate.nasa.gov/images-of-change?id=579#579-urban-expansion-in-new-delhi-india

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Mark Scheme (Results)

November 2020

Pearson Edexcel GCSE
In Geography B (1GB0)
Paper 01: Global Geographical Issues

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question number	Answer	Marks
1a (i)	C. All other answers are incorrect. Here a dense oceanic plate converges with a less dense continental plate.	1
1a (ii)	Accept any response from stratovolcano, composite volcano or volcano cone.	1
1b	Allow 1 mark for identifying a cause of tectonic plate movement and further marks for explanation. ● Convection currents cause plate movement (1). These currents are generated by heat from the core (1) and push/pull/drag the overlying plates (1). ● Heat rising and falling in the mantle (1) creates convection currents (1) which are generated by radioactive decay in the core (1). ● Convection currents (1) caused by the radioactive decay of elements in the core (1) push/pulls/drags the tectonic plate (1). ● Ridge push can cause plate movement (1). Newly formed plates at ocean ridges have high elevation (1) which pushes away the plate further from the oceanic ridge (1). ● Slab pull causes the movement of plates (1) denser plates sinking at subduction zones (1) pull the rest of plate along with it (1). **Accept any other appropriate response.**	3
1c(i)	Award one mark for each descriptive point up to a maximum of 3 marks. ● Overall, Arctic ice declines in the period shown (1). ● There are fluctuations in the extent of Arctic ice (1). ● Whereas overall ice shows a decline, there are periods when it increases (1). ● In 1978, there was just over 16.3 million km^2 of ice in the Arctic by 2018 this had fallen to 14.3 million km^2 of ice. ● 1994 is the first time the ice extent drops below the 1978-2018 average (1). ● Since 2003, the ice extent has been below the 1978-2018 average (1). ● Ice extent fell rapidly between 2003-2006 (1). ● In total, between 1978-2018, the ice extent has reduced by 2 million km^2 (1). ● The extent of ice increased by 0.7 million km^2 between 2011-2012. (1). **Max 2 marks if no use of numerical data.** **Accept any other appropriate response.**	3

1c(ii)	Award 1 mark for any cause of Arctic ice decrease: ● Increased concentrations of greenhouse gases lead to the melting (1). ● Global warming/increased global temperatures (1). ● Climate change / changing temperatures (1). **Accept any other appropriate response.**	1
1c (iii)	Allow 1 mark for each correctly identifying a why people's lives will be impacted upon by declining Arctic ice levels and a further mark for explanation up to a maximum of two marks each. Note that consequences may be positive as well as negative and the impacts on people may be outside of the Arctic circle. ● Melting Arctic ice will lead to rises in sea levels (1) which may result in coastal flooding (1). ● Melting ice can lead to the destruction of animal habitats (1) which people rely upon to provide food and furs (1). ● Melting sea ice can have an effect on ocean circulation (1) potential leading to climate changes (1). ● Melting Arctic ice can result in the release of methane from permafrost (1) leading to further global warming (1). ● Unstable ice can lead to difficulties when fishing (1) leading to injuries and death (1). ● Melting ice leads to transport becoming difficult (1), isolating communities (1). ● Decreasing Arctic ice can lead to an erosion of indigenous cultures (1) as traditional sources of employment are replaced by work in the oil/gas industry (1). ● Early spring ice melting will give a longer fishing season (1), this will lead to increased incomes for indigenous people (1). ● Melting Arctic ice opens new shipping routes (1), boosting trade and being a source of employment in Arctic towns (1). ● Reduced Arctic sea ice coverage will lead to increased oil exploration in the area (1), this will provide a source of employment for local people (1). **Accept any other appropriate response.**	4
1d	Award 1 mark for identifying a source of evidence which can be used to explain natural climates and a further mark for explanation. ● Ice cores (1) can be analysed to determine the amount of carbon dioxide in them (1). ● Historical records such as paintings/diary entries (1) may inform about frost fairs on the Thames/ difficult growing conditions (1).	2

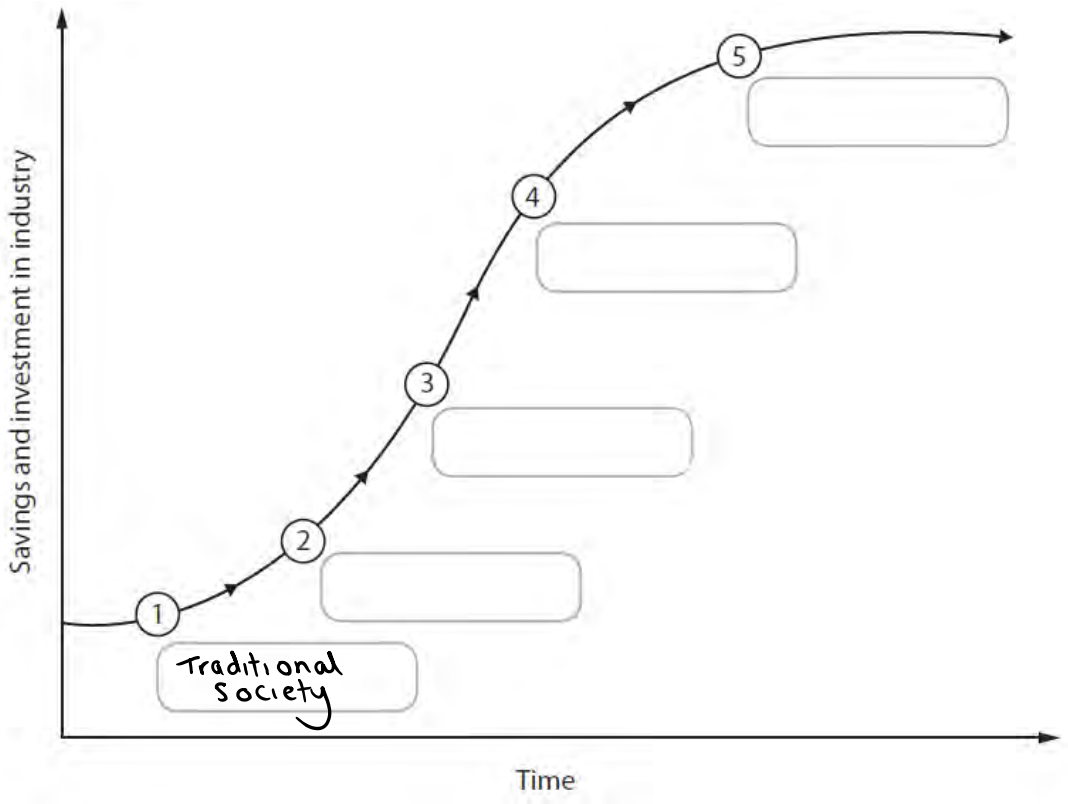
	● Tree rings (1) can be examined with greater thickness indicating better growing periods/higher temperatures (1). **Accept any other appropriate response.**	
1e (i)	D – Fuel used in energy industries. All other answers are incorrect.	1
1e (ii)	Allow 1 mark for each stage of the calculation. Award 1 mark for showing working of percentage decrease/change (difference between two figures / 1990 figure x 100) 1235/4365 x 100 **OR** 100-(3112/4365 x100) **OR** 3112/4365x100 = 71.29. 100-71.29 = 28.71 Award one mark for the answer to one decimal place. Answer: -28.7% or 28.7% (1).	2
1f	Award 1 mark for identifying a reason why tropical storms lose energy and further mark for an explanation of that reason up to a max of 2 marks for each explanation. ● When tropical storms reach land (1), they no longer have access to warm water which is their source of power (1). ● Tropical storms lose energy when they move into areas of cooler water (1). They require water with a temperature of above 26.5 degrees Celsius (1). ● They lose energy when they meet different weather systems (1) where winds are blowing in the different directions / wind shear is high (1). **Accept any other appropriate response.**	4
1g	**AO2 (4 marks) / AO3 (4 marks)** **Vulnerability can be interpreted to be physical or socio-economic vulnerability.**	8

	AO2 (4 marks) ● Developed nations governments are able to provide large amounts of monetary assistance and rapidly mobilise emergency services. For example, in Hurricane Michael in 2018, air ambulance emergency services were ready to be deployed from Miami to help those in need. ● Low lying nations are particularly at risk. Much of Bangladesh is very close to sea level meaning that storm surges often have a devastating impact as was the case in Cyclone Alia in 2009. ● The strength of the storm and accompanying storm surge impact vulnerability. Hurricane Katrina produced a 6m high storm surge with wind speeds over 120mph which caused flooding in many districts of New Orleans. ● The ability of the government to effectively reduce vulnerability is important. Educating the population as to what to do in the event of a tropical storm as well as preparing storm defences can help to reduce vulnerability. ● Areas in multi-hazard zones such as the Philippines are very vulnerable to the impacts of tropical storms. Heavy rain can cause landslides as was the case in Typhoon Mangkhut in 2018 which buried entire villages. ● Some countries are not in the path of tropical cyclones. Surrounding sea areas are too cool for the formation of tropical cyclones or they may be inland locations, far away from a sea of 26.5 degrees and above which provides tropical cyclones with their source of energy. **AO3 (4 marks)** ● Judgement about the most significant social factors contributing to vulnerability. For example, although the fact that much of Bangladesh is very low-lying made a significant contribution to 750,000 people made homeless in Cyclone Aila in 2009, the overall lack of economic development was a more significant factor. Of those affected 90% were from low-income groups living in areas of high population density close to the coastline. ● Judgement about the most significant physical factors contributing to vulnerability. For example, Hurricane Katrina was a category 4 tropical storm with wind speeds over 120mph which made landfall in New Orleans. Significantly, much of New Orleans is below sea level and its inadequate system of levees were flooded by the 6m high storm surge. ● Judgement regarding the importance of systems of prediction and preparation. For example, a significant factor which reduced the vulnerability of the population of Florida to the impacts of Hurricane Michael was the warnings given by the National Weather Centre as the storm approached. This reduced injuries and the overall death toll. ● Judgement regarding the increasing ability of developing economies to prepare effectively for tropical storms. For example,	

	although 190 people were killed in Cyclone Alia, vulnerability of the population was significantly reduced by the creation of a network of cyclone shelters.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

2a (i)	A - The annual number of deaths of women from pregnancy per 100 000 live births. All other answers are incorrect.	1

2a (ii)	D Gross Domestic Product (GDP) per capita. All other answers are social measure of development.	1
2b	Award 1 mark for identifying a reason for a decline in fertility rates and a further mark for explanation of that point. ● Improving education/literacy levels in women (1) improves knowledge of birth control methods (1). ● As female education improves (1) women are more likely to have opportunities for careers/employment (1). ● More money Is spent on birth control programmes (1) educating the population about the advantages of having smaller families (1). **No mark for simply stating there are less children born.** **Accept any other appropriate response.**	2
2c (i)	 Mark awarded for the 'traditional society' being labelled in stage 1 (box) (1).	1
2c (ii)	Award one mark for explanation of the level of development /a stage of the Rostow model and further two marks for explanation of subsequent stages.	3

	● Rostow states that countries begin with a traditional society which involves subsistence agriculture (1), countries then invest in technology which enables them to prepare for the take-off stage (1). This often involves rapid industrialisation and further increase in investment (1). ● As countries develop, Rostow stated that rapid industrialisation occurs during the take-off stage (1), this is followed by an increase in the purchase of consumer goods as countries move through the drive to maturity (1) until eventually the age of high-mass consumption is reached where consumer good purchase is at its highest and the country at its wealthiest. (1). **NB No marks for simply identifying a stage of the Rostow model. The stage needs to be explained.** **Accept any other appropriate response.**	
2d	Award 1 mark for identification of an advantage and a further mark for extension of this reason, up to a maximum of 2 marks. ● Intermediate technology makes use of local materials (1) which are cheap and easily available (1). ● Intermediate technology involves low-tech solutions to help local people (1) which can easily be repaired should they break down (1). ● Intermediate technology uses cheap materials (1), which can be afforded by poor people in developing societies (1). **Accept any other appropriate response.**	2
2e (i)	Award 3 marks for a correctly drawn compound bar graph. Allow +/- 1% for each quintile. 3 or 4 quintiles correctly drawn = 3 marks. 2 quintiles correctly drawn = 2 mark. 1 quintile correctly drawn = 1 mark. 0 quintiles correctly drawn = 0 marks.	3
2e (ii)	61%-3% = 58%. Award one mark for the correct answer of 58%.	1
2f (i)	Award 1 calculation mark for identifying the lower quartile (Labuan 0.742) and upper quartile (Melaka 0.794) and a further mark for the correct answer obtained by subtracting the lower quartile from the upper quartile. 0.794 – 0.742 (1) and 1 mark for the correct answer of 0.052 (1).	2

2f (ii)	Award 1 mark for the identification of a suitable data presentation technique and another mark for description of the technique. ● A choropleth map could be used (1) with different shading to show HDI score intervals (1). ● A bar graph could be used (1) with states along the x axis and HDI scores on the y axis (1). **Accept any other appropriate response.**	2
2g	Award 1 mark for identifying a source of water pollution and a further mark for explanation on the impact on water quality. ● Industrial activity (1) can release chemicals into local water sources (1). ● Increasing urban populations can put stress on sanitation systems(1) which can result in untreated sewerage entering local rivers (1). ● Leakage from poorly managed garbage collection facilities (1) can contaminate groundwater supplies (1). ● The disposal of rubbish in rivers (1) can release chemicals into water sources (1). **Must have impact on water quality to gain the explanation mark.** **Accept any other appropriate response.**	4
2h	**AO2 4 marks / AO3 4 marks** **A02 4 marks** ● TNCs provide employment opportunities by creating jobs in emerging countries. For example, Apple has created over 700,000 jobs in China as it seeks to minimise costs. ● There have been reports of people working in very poor working conditions whilst employed by TNCs in emerging country. Known as 'sweatshops', TNCs have been alleged to take advantage of the non-existence of workers' rights and exploit their workforce. ● Employment generated by TNCs helps to boost local economies through the multiplier effect whereby increased spending generates more opportunities both for TNCs and local businesses. ● Much of the profits from TNCs leave the host country and return to more developed nations. The overall economic benefit of TNCs may therefore be fairly minimal.	8

	● TNCs help to develop the infrastructure of the area in which they are based by constructing roads, improving power provision and telecommunications. ● Much of the infrastructure constructed often only directly benefits the TNCs rather than having a positive impact on local communities. **AO3 4 marks** ● Judgement regarding the overall economic impact of TNCs in emerging countries, evaluating positive and negative arguments. ● Judgement regarding the overall social impact of TNCs in emerging countries, evaluating positive and negative impacts. ● Judgement regarding the overall environmental impact of TNCs in emerging countries, evaluating positive and negative impacts. ● Judgement regarding the importance of foreign investment (TNCs) in the economic development of the country. ● Overall judgement regarding the impact of TNCs, supported by evidence.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* ● Learners write nothing. ● Learner's response does not relate to the question. ● Learner's achievement in SPaG does not reach the threshold performance level, for example severe errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* ● Learners spell and punctuate with reasonable accuracy. ● Learners use rules of grammar with general control of maning overall. ● Learners use a limited range of specialist terms as appropriate.
SpaG 2	2-3	*Intermediate performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a good range of specialist terms as appropriate.
SpaG 3	4	*High performance* ● Learners spell and punctuate with considerable accuracy.

		● Learners use rules of grammar with effective control of meaning overall. ● Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
3a (i)	C A city with a much larger influence than the other cities in the country. All other answers are incorrect.	1
3a (ii)	Award 1 mark for the correct definition. A megacity is a city with a population of 10 million or more (1).	1
3b (i)	Award 1 mark for the calculation for a mean value. The addition of the % annual rate of change of the urban population values divided by 6 and a further mark for the mean correctly calculated to 1 decimal place. Addition of the values 25.68 / 6 (=4.28) (1) 4.3% or 4.3 (1)	2
3b (ii)	Award 1 mark for correctly stating why rates of urbanisation may differ between countries and a further mark for explanation of that reason. ● In some countries, there may be more rapid rates of rural to urban migration (1) due to investment in urban locations from TNCs (1). ● In some countries, there may be more rapid rates of natural increase (1) especially in cities where access to contraception may be an issue (1). ● In some countries, civil war and the lack of security in rural areas (1) has led to rapid rural-urban migration as people seek safety (1). ● Some countries already have a high percentage of their total population which is urban (1) so the rates of urbanisation may be smaller (1). **Accept any other appropriate response.**	2
3c (i)	B – Workers pay taxes on their earnings. All other responses are characteristics of informal employment.	1
3c (ii)	Award 1 mark for the correct answer. 84.8%-14.2% = 70.6% or 70.6 (1).	1
3c (iii)	Award 1 mark for identifying a reason why people work in informal employment in developing countries and a further mark for an extension of that difference up to a max of 2 marks for each explanation. ● In low income countries there are often a larger number of informal workers due to a lack of formal jobs (1) because of a lack of investment (1).	4

	● In developing world cities there is a lack of formal jobs (1) caused by rapid rural-urban migration (1). ● In developing world cities people often lack the skills required in formal jobs (1) because of a poor education (1). **Please note: Take care to avoid double crediting responses. Only allow 1 mark for lack/shortage of formal jobs.** **Accept any other appropriate response.**	
3d (i)	C Commercial. The image clearly shows the central business district with tall, high-density buildings. A Residential areas are visible mainly in the north of the image but are not the main type of land use. B With the area being so high density with tall buildings, it is apparent there is a lack of industry which would require very large sites. The cost of land in the area would be restrictive to industrial development. D There is some transport in the area with highway 75 and 375 visible as well as the Detroit People Mover but commercial land use dominates.	1
3d (ii)	Award 1 mark for each valid description of the location of sporting facilities in the area using the compass point or a description of its proximity to a feature or use of the scale. The facilities may be described as a group or individually. Allow a maximum of 1 proximity mark. ● Sporting facilities are found to the north of the central business district (1). ● Sporting facilities 1 and 2 are close to Highway 75 (1). ● Sporting facility 3 is close to Highway 375 (1). ● They are close to residential areas (1). ● The sporting facilities are found quite close to each other (1). ● Sporting facility 2 is found very close to sporting facility 3 (1) ● Sporting facility 1 is 300m North of the boundary of the CBD (1). ● Sporting facilities are outside of the CBD area (1). **Accept any other appropriate response.**	2
3d (iii)	Award one mark for identifying an advantage of the location of the site and a further mark for extension of that factor, up to a maximum two marks each. ● The site is close to the Detroit people mover (1) which will provide easy access for the public. (1). ● Being a redevelopment site, it may be an area of vacant land (1) which will minimise redevelopment costs (1).	4

	● The site is in near many other large commercial premises / in Detroit's CBD (1) making it an area with high footfall (1). ● The site is close to many major roads (1) which improve accessibility (1). ● The site would be attractive for residential development as it is approx. 600-700m north of the Detroit River (1), which could provide attractive waterfront walks (1). **Accept any other appropriate response.**	
3 (e)	Award one mark for identifying a locational factor which has contributed to the growth of the megacity and further marks for explanation of the factor identified. Growth can be explained in terms of a cities' economic, physical or demographic growth. ● Mumbai's location on the West coast of India (1) allows it to easily trade with both the Middle East and European countries (1) helping it to develop its huge port through imports and exports (1). ● Being situated close to huge oil reserves (1) has enabled Lagos to become an important oil port (1) which has attracted large numbers of migrants to the city (1). ● Situated centrally on the Chinese coast (1), Shanghai has developed as a major port both nationally and internationally (1). This has helped it to become a major export zone for TNC's (1). ● Jakarta's position limits growth to the north and west (1). Most of the growth has been to the south of Jakarta Bay (1). The land near the coast is flat making it an attractive site for industry (1). **NB** The location factor which has been identified needs to be accurate. A generic answer identifying a locational factor lacking accurate application to a megacity max 1 mark. **Accept any other appropriate response.**	3
3 (f)	**AO2 (4 marks) / AO3 (4 marks)** **AO2 (4 marks)** ● Quality of life is the standard of health, comfort, and happiness experienced by an individual or group. ● Levels of education impact upon the quality of life in megacities. In Mumbai, people who have had a poorer education find themselves living in shanty towns such as Dharavi whereas highly educated middle class people in formal sector jobs live in wealthier areas such as Malabar Hills. ● Lower levels of education, and lower incomes often lead to living in slum accommodation such as Makoko in Lagos. Here, access to safe drinking water is a problem leading to increased incidence of disease. In contrast, the expensive housing in Banana Island with its wealthier residents have access to healthcare as well as clean drinking water. ● Infrastructure provision can vary enormously across a city with authorities lacking the resources to provide city-wide coverage. For example, some areas may be connected to a water supply or	8

	electricity network whereas some more informal settlements may not have such facilities. **AO3 (4 marks)** ● Judgement about which of the factors which have the greatest impact on overall quality of life. ● Judgement regarding the level of disparity in quality of life between the different residential areas of the megacity. ● Judgement regarding improvements to quality of life being made in shanty town areas as residents become more assimilated into city life. ● Judgement regarding the ability of the government to improve the quality of life for residents in areas where the quality of life is an issue.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Monday 18 May 2020

Morning (Time: 1 hour 30 minutes) | Paper Reference **1GB0/01**

Geography B

Paper 1: Global Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need*.
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question*.
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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P 6 1 8 7 9 A 0 1 2 8

Pearson

SECTION A

Hazardous Earth

Answer ALL questions in this section.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Study Figure 1 which shows a plate boundary along the west coast of South America.

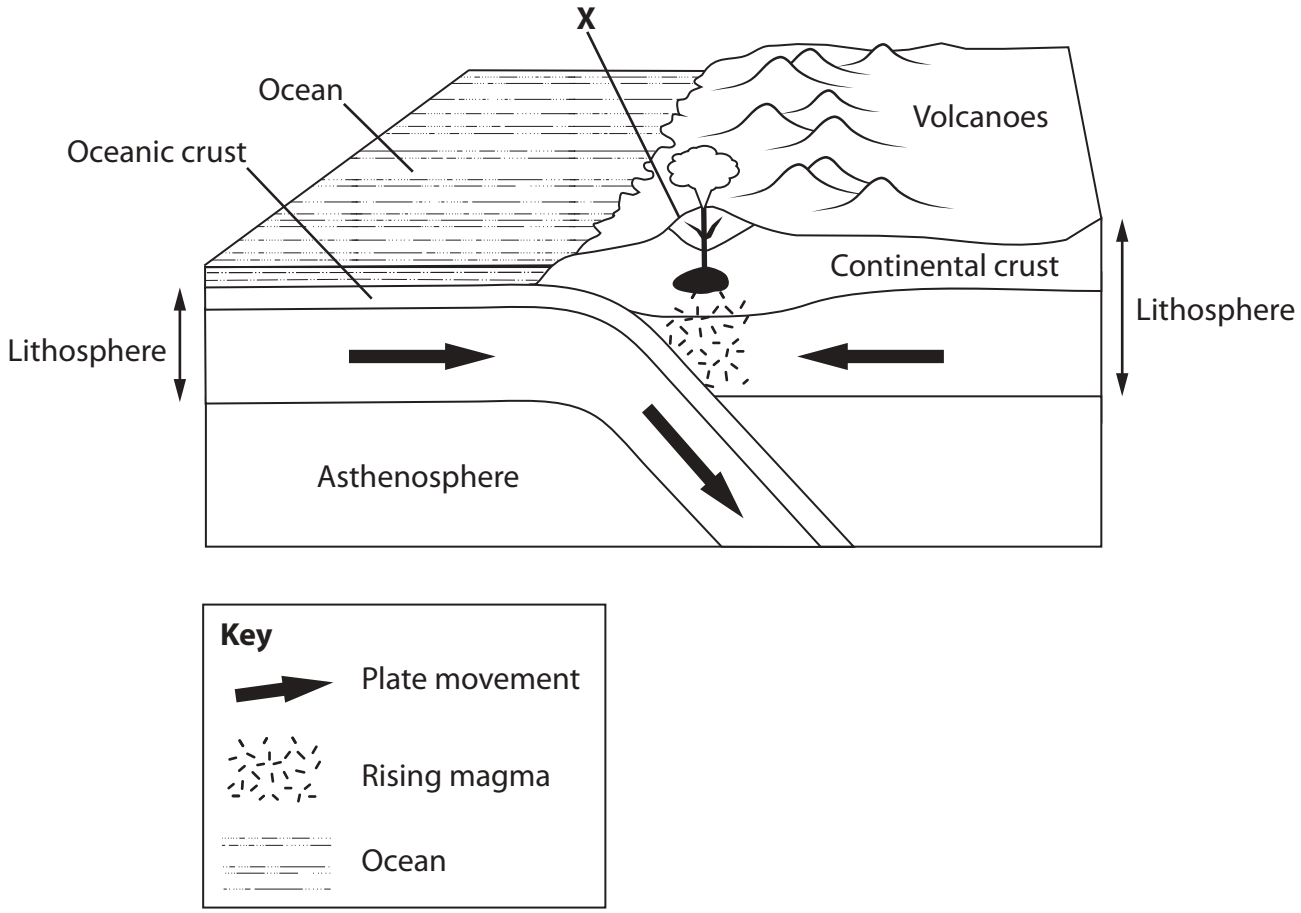


Figure 1

(i) Identify the type of plate tectonic feature shown.

(1)

☒ **A** A divergent boundary

☒ **B** A hotspot

☒ **C** A convergent boundary

☒ **D** A conservative boundary

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(ii) Name the type of volcano found at **X**.

(1)

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(b) Explain **one** cause of tectonic plate movement.

(3)

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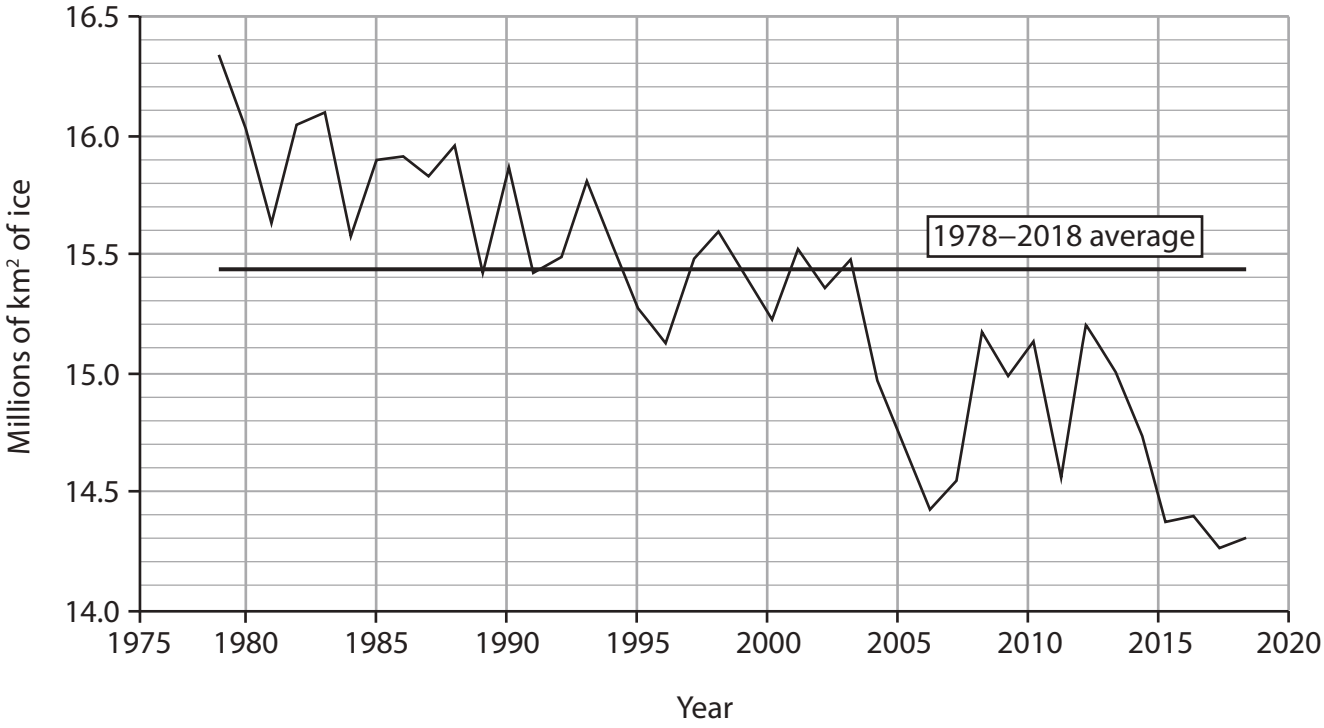
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(c) Study Figure 2 which shows the area of ice in the Arctic Ocean each spring between 1978 and 2018.



Key

—— 1978–2018 average

Figure 2

(i) Describe the trend in the area of Arctic ice between 1978 and 2018.

Use data in your answer.

(3)

(ii) Identify **one** reason for the changing area of Arctic ice shown in Figure 2.

(1)

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(iii) Explain **two** ways in which changes in the area of Arctic ice may have consequences for people.

(4)

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(d) Explain **one** piece of evidence of natural climate change.

(2)

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(e) Study Figure 3 which shows sources of greenhouse gas emissions in the European Union for 1990 and 2018.

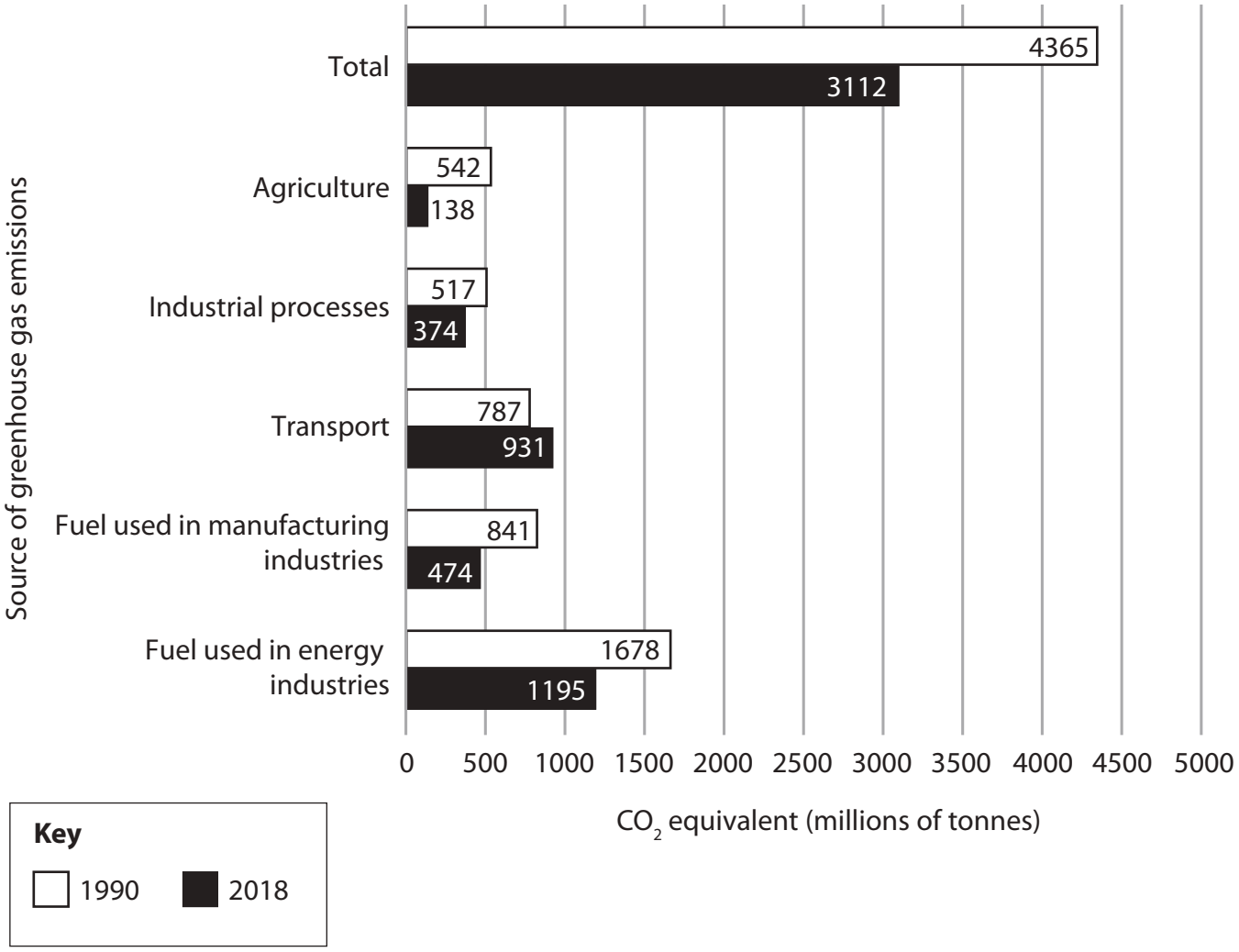


Figure 3

(i) Identify which human activity was producing the most greenhouse gas emissions in 2018.

(1)

☒ **A** agriculture

☒ **B** transport

☒ **C** fuel used in manufacturing industries

☒ **D** fuel used in energy industries

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(ii) Calculate the percentage decrease in total emissions (CO_2 equivalent) between 1990 and 2018.

Give your answer to one decimal place.

Show your working below.

(2)

.....%

(f) Explain two reasons why tropical cyclones lose their energy.

(4)

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(g) Assess the reasons why some countries are more vulnerable than others to the impacts of tropical cyclones.

(8)

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(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

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SECTION B

Development Dynamics

Answer ALL questions in this section.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and the use of specialist terminology will be assessed in 2(h).

2 (a) (i) Identify which **one** of the following is a definition of **maternal mortality rate**.

(1)

☒ **A** The annual number of deaths per 100 000 women whilst pregnant or in childbirth

☒ **B** The annual number of live births in a location per 1000 people

☒ **C** The annual number of deaths in a location per 1000 people

☒ **D** The annual number of children per 100 000 who die before their first birthday

(ii) Identify which one of the following is an economic measure of development.

(1)

☒ **A** death rate

☒ **B** infant mortality rate

☒ **C** life expectancy

☒ **D** Gross Domestic Product (GDP) per capita

(b) Explain **one** reason why fertility rates fall as countries develop.

(2)

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(c) Study Figure 4 which shows the five stages of Rostow's modernisation theory.

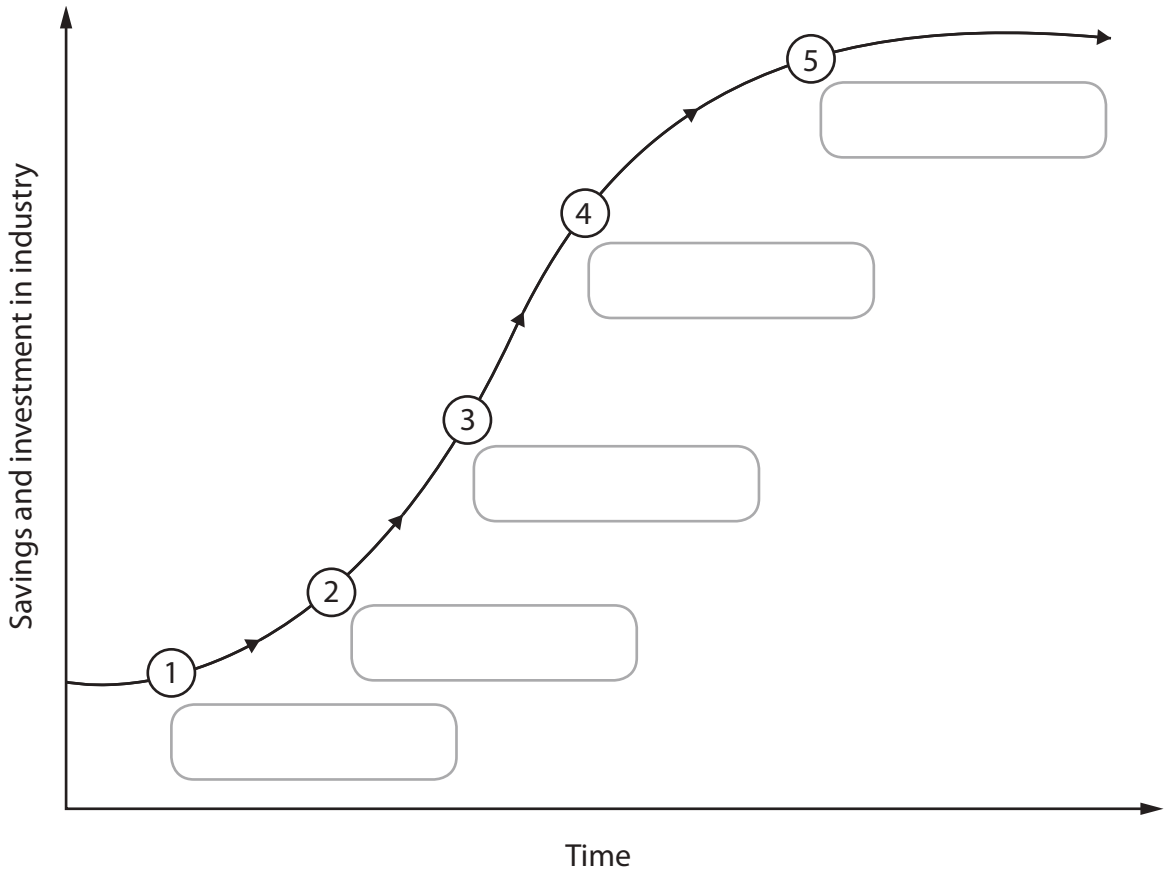


Figure 4

(i) Label the **traditional society** stage of Rostow's modernisation theory on Figure 4.

(1)

(ii) Explain how Rostow's modernisation theory can be used to understand how countries develop over time.

(3)

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(d) Explain **one** advantage of using intermediate technology.

(2)

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(e) Study Figure 5 which shows the share of total national wealth earned by five income groups from the poorest 20% to the richest 20% of the population in India and Zambia.

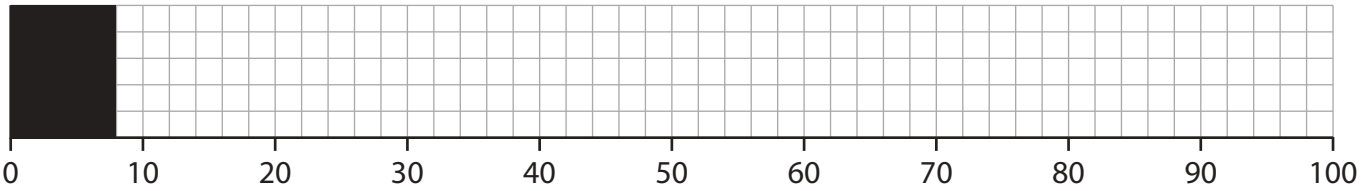
Country	Poorest 20%	Fourth 20%	Third 20%	Second 20%	Richest 20%
India (an emerging country) % share of national wealth	8	12	15	21	44
Zambia (a developing country) % share of national wealth	3	6	11	19	61

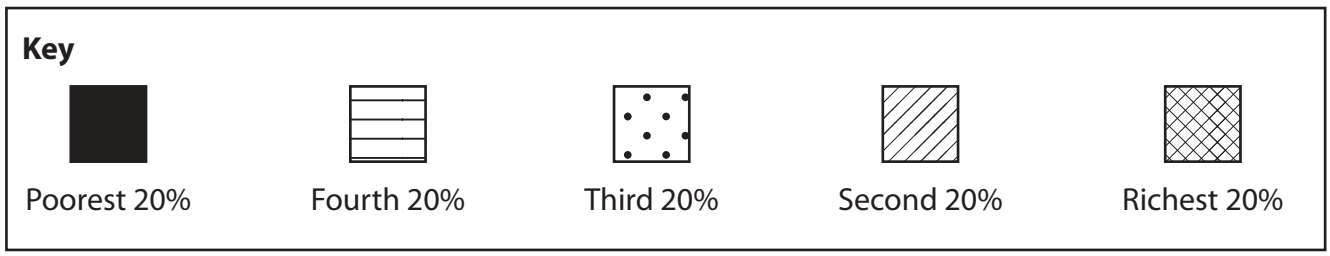
Figure 5

(i) Draw a compound bar graph using the key to show the percentage (%) share of national wealth for India using the data from Figure 5.

(3)

The poorest 20% has already been drawn for you.





(ii) Calculate the difference between the percentage income share of the richest and poorest 20% for Zambia.

(1)

.....%

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(f) Study Figure 6 which shows the Human Development Index (HDI) levels for states and federal territories in Malaysia.

Malaysian state / territory	Human development index (HDI)
Kuala Lumpur	0.822
Selangor	0.819
Penang	0.803
Melaka	0.794
Negeri Sembilan	0.789
Johor	0.785
Perak	0.778
Kedah	0.769
Perlis	0.767
Pahang	0.766
Terengganu	0.762
Labuan	0.742
Kelantan	0.741
Sarawak	0.709
Sabah	0.674

Figure 6

(i) Calculate the interquartile range of HDI scores given in Figure 6.

Show your working.

(2)

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(ii) Describe another suitable data presentation technique that could be used to display the differences in HDI data shown in Figure 6.

(2)

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(g) Explain **two** ways economic development can lead to water pollution.

(4)

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(h) For a named emerging country, evaluate the role of transnational corporations (TNCs) in its development.

(8)

Named emerging country .....

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(Total for spelling, punctuation, grammar and use of specialist technology = 4 marks)
(Total for Question 2 = 34 marks)

TOTAL FOR SECTION B = 34 MARKS

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SECTION C

Challenges of an Urbanising World

Answer ALL questions in this section.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 (a) (i) Identify which **one** of the following is a definition of urban primacy.

(1)

☒ **A** A city with a population of over 1 million people

☒ **B** A city which is experiencing de-industrialisation

☒ **C** A city with a much larger influence than the other cities in the country

☒ **D** A city which is dominated by industries such as mining and fishing

(ii) Define the term **megacity**.

(1)

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(b) Study Figure 7 which shows data about the urban populations of selected African countries.

Country	Annual rate of growth of urban population (%)	Percentage of population which is urban
Angola	4.32	65.5
Burkina Faso	4.99	29.4
Burundi	5.68	13.0
Eritrea	3.86	40.1
Mali	4.86	42.4
South Africa	1.97	66.4

Figure 7

(i) Calculate the mean annual rate of growth of urban population.

Give your answer to one decimal place.

Show your working.

(2)

.....%

(ii) Suggest **one** reason for the differences in the annual rate of growth of urban population shown in Figure 7.

(2)

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(c) Study Figure 8 which shows variations in the type of employment for countries at different levels of development.

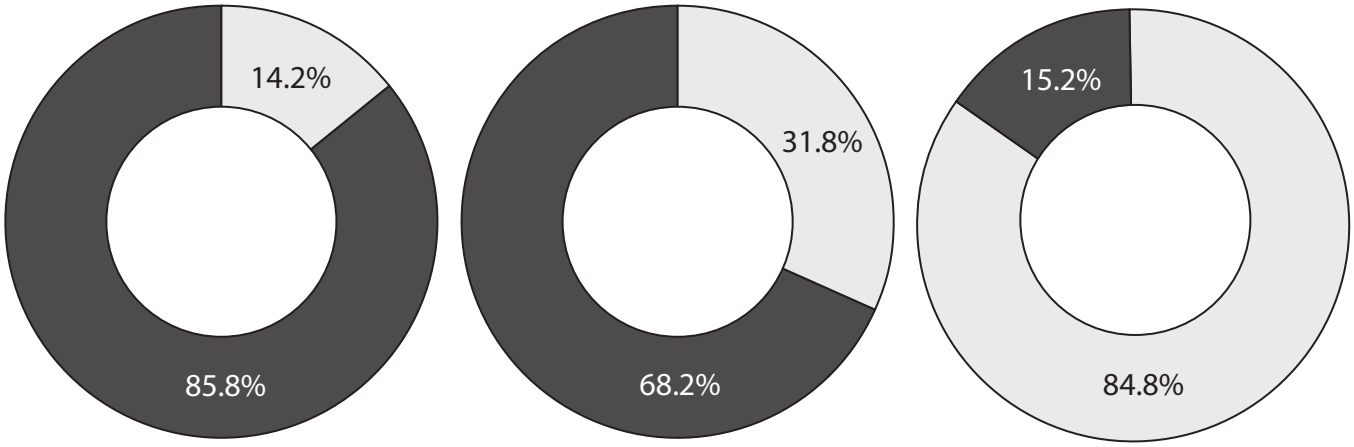


Figure 8

(i) Identify **one** characteristic of formal employment.

(1)

- ☒ **A** jobs do not have a weekly regular wage
- ☒ **B** workers pay taxes on their earnings
- ☒ **C** workers have little income protection if they fall sick
- ☒ **D** jobs often involve working irregular hours

(ii) Calculate the difference between the percentage (%) employed in the formal sector in developed and developing countries using Figure 8.

(1)

.....%

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(iii) Explain **two** reasons why there is a high percentage of people working in informal employment in cities in developing countries.

(4)

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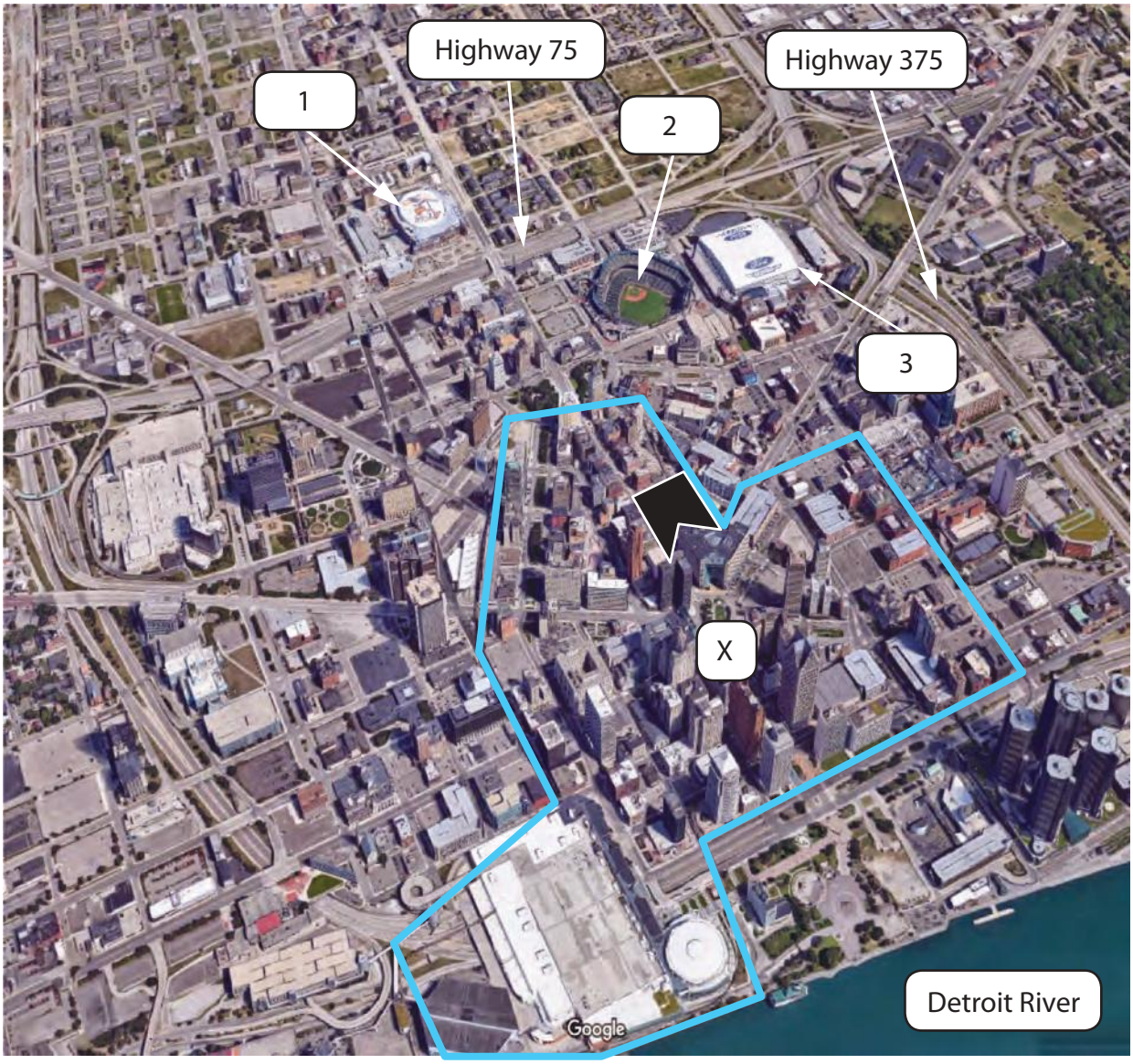
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(d) Study Figure 9 which shows a satellite image of Detroit, USA.



Key

The boundary of Central Business District (CBD) and route of the Detroit People Mover train system

Hudson's redevelopment site

1, 2, 3 Sporting facilities

0 150 m

N

Figure 9

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(i) Identify the main type of land use shown in Figure 9 at location **X**.

(1)

- ☒ **A** residential
- ☒ **B** industrial
- ☒ **C** commercial
- ☒ **D** transport

(ii) Describe the distribution of sports facilities in this area.

(2)

(iii) Suggest **two** reasons why the Hudson's redevelopment site may be attractive for future development.

(4)

1 .....

2 .....

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(e) For a named megacity, explain **one** way its location has influenced its growth.

(3)

Named megacity .....

(f) For a named megacity in either a developing or an emerging country, assess the reasons why the quality of life varies so much.

(8)

Named megacity .....

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(Total for Question 3 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

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Mark Scheme (Results)

November 2021

Pearson Edexcel GCSE B in

Geography (1GB0)

Paper 01 - Global Geographical Issues

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question number	Answer	Marks
1a (i)	A 2015. All other answers are incorrect. B Is incorrect. In 2000 the ppm concentration is at 370ppm C is incorrect. In 1995 the ppm concentration is at 360 ppm. D is incorrect. In 1990 the ppm concentration is at 355ppm.	1
1a (ii)	Allow 1 mark for an answer in the range of 93-97 ppm. In 1960 the ppm concentration is 316 ppm. In 2020 the ppm concentration is 411 pm. The increase is 95 ppm.	1
1a (iii)	Allow 1 mark for identifying a human activity which causes the enhanced greenhouse effect up to a maximum of 2 marks. ● Burning fossil fuels (1). ● Industrial processes (1). ● Deforestation (1). ● Emissions from motor vehicles (1). ● Rice farming (1). ● Driving cars (1) ● Using CFC's (1). ● Breeding cattle (1). ● Changing land use from forests to agriculture (1). Accept any other appropriate response.	2

1b	Award one mark for identifying a piece of evidence which suggests human activity is causing climate change and a further mark for explanation of that point up to a maximum of two marks. ● Sea levels are rising (1) as a result of melting ice caps (1). ● Sea levels are rising (1) as a result of warming oceans (1). ● Arctic ice sheets are decreasing in area (1) as a result of rising temperatures (1). ● Glaciers are decreasing in size (1) as a result of increased summer melt (1) ● Extreme weather events are becoming more frequent (1) as a result of rising temperatures (1). ● Global temperatures are rising (1) with the warmest years recorded being in recent years (1). ● Droughts are becoming increasingly common (1) as a result of changing weather patterns (1). ● Plants are flowering earlier than previously recorded (1) due to rising temperatures (1). ● Concentrations of carbon dioxide are increasing (1) leading to the enhanced greenhouse effect (1). Accept any other appropriate response.	2
1c(i)	B. All other answers are incorrect. A June – Oct is when tropical cyclones are common in the Eastern Pacific off the coast of Central America. C Jan – Mar is when tropical cyclones are common in the Indian Ocean. D June – Dec is when tropical cyclones are common in the Western Pacific off the coast of Japan and the Philippines.	1
1c(ii)	Award 1 mark for each stage of the calculation. Award 1 mark for showing working of percentage (98 tropical cyclones / 140 x 100) (1). Award 1 mark for the correct answer = 70%	2

1c (iii)	Allow 1 mark for identifying a feature of the distribution of tropical cyclone source areas and further marks for explanation up to a maximum of 3 marks. ● Tropical cyclones source areas occur in a band between the tropics of Cancer and Capricorn (1) where seas are warm (above 27 degrees) (1) causing warm air to rapidly rise (1). ● Tropical cyclones are found over oceans (1), where seas are warm (1). Here's warm air rises rapidly (1). ● Tropical cyclones source areas are found away from the equator (1) where the Coriolis force is minimal (1) but instead where the rotation effect is stronger at around 5-30 degrees N/S of the equator (1). ● Some tropical cyclones have the source area outside of the tropics (1) where seas are quite warm (1). Here the rotation of the earth causes the storm to spin (1). Accept any other appropriate response.	3
1c(iv)	Award 1 mark for identifying a use of satellite imagery and a further mark for description up to a maximum of two marks. ● Before and after satellite images could be compared (1) and used to assess damage to natural and man-made features (1). ● Following a cyclone, satellite imagery could be used to map the extent of the damage (1) focussing on human or natural features (1) ● After the storm, satellite imagery could show damage to housing (1) and be compared to imagery before the storm (1). ● Damage to transport infrastructure could be mapped (1) to gain an understanding how relief efforts may be made more difficult (1). ● Satellite imagery could reveal the size of the storm (1). This could be compared to previous storms and subsequent impacts (1). Accept any other appropriate response.	2

1d (i)	Award one mark for the idea of earthquakes resulting from plate motion and a further mark for the idea of water displacement. ● The movement of tectonic plates (1) causes water to be displaced (1). ● As a denser oceanic crust sinks beneath continental crust (1), the oceanic crust may 'flip' causing water above it to move (1). ● At a subduction zone (1) there can be a displacement of water (1). Accept any other appropriate response.	2
1d (ii)	Award 1 mark for identifying a reason why Palu was particularly vulnerable and a further mark for an extension of that reason up to a max of 2 marks for each explanation. ● Palu is 90km from the epicentre of the earthquake (1), residents would not have had time to leave coastal areas before the tsunami arrived (1) ● Tsunami waves were 6.5m high (1), hitting an area with a high population density (1). ● Palu has a high population density/large population (1), locals would not have been able to evacuate in time (1). ● Palu is an urban area (1) making it residents very vulnerable to buildings collapsing (1). ● The population density of parts of Palu is between 600-750 people per sq km. (1). Such large concentrations near the coastline may not have evacuated in time (1). ● The tsunami wave height was 5.5m higher than Dongala (1). This would cause considerable damage to infrastructure / housing (1). ● The earthquake had a very powerful (7.5 magnitude) / shallow focus (10km) (1). This would have caused significant damage to Palu's buildings (1). ● Palu is at the southern end of a funnel shaped bay/ on the coast (1). This may have led to large waves as the bay became shallower/narrower (1). Accept any other appropriate response. NB Answers relating to Palu's vulnerability must make reference to Figure 3.	4

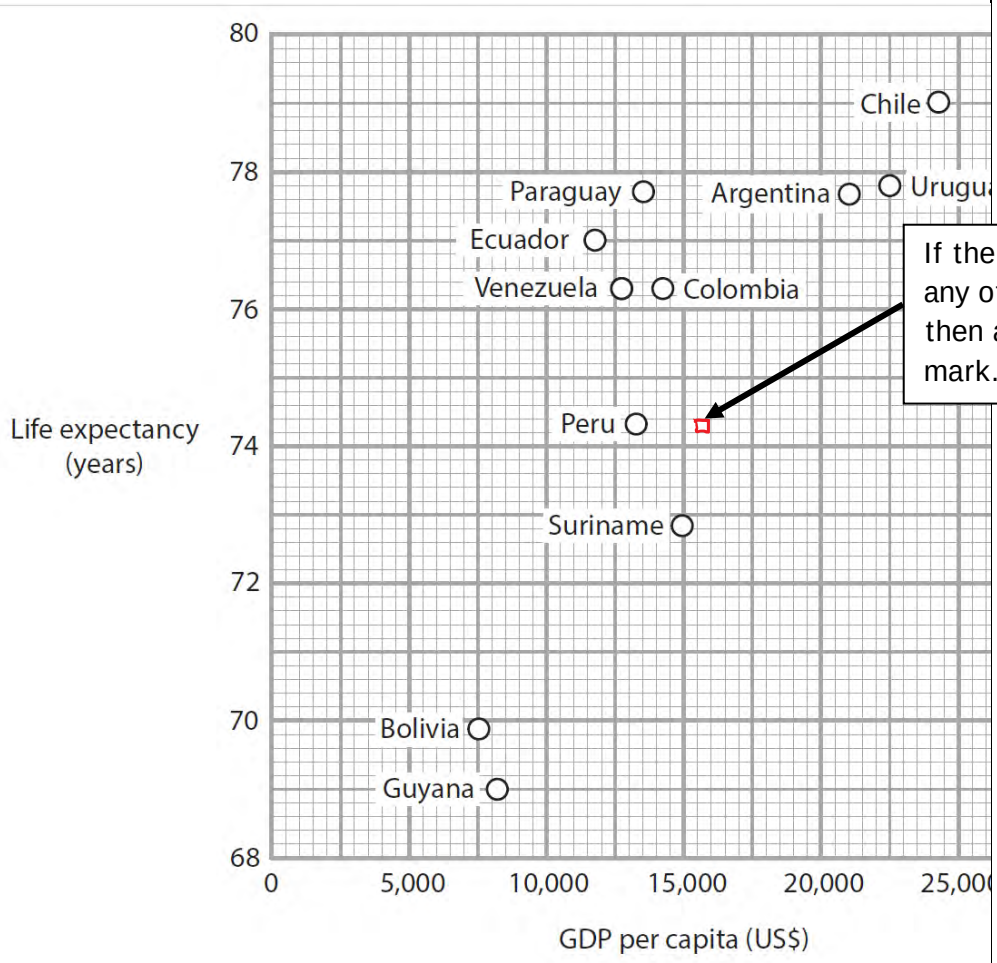
1e	Award one mark for the correct identification of a difference between shield and composite volcanoes and a further mark for explanation of that difference. ● Shield volcanoes are more gently sloping than composite volcanoes (1) this is because their magma is less viscous (1). ● Composite volcanoes are more explosive than shield volcanoes (1) this is because their lava has a higher gas content (1). ● Shield volcanoes tend to cover a greater area (1) this is because their lava travels long distances before cooling (1). ● Shield volcanoes erupt more frequently (1) this is because they have less viscous lava requiring less pressure to erupt (1). Give credit to diagrams taking care not to double credit. NB Simplistic reference to plate boundary type, for example – shield divergent, composite convergent insufficient. Accept any other appropriate response.	2
1f	AO2 (4 marks) / AO3 (4 marks) AO2 (4 marks) Candidates may reference any aspect of volcano or earthquake management such as methods of prediction, preparation or response. Earthquake ● Ensure that newer buildings are built to 'earthquake resistant' building codes. ● Educate the population about what to do in the lead up to an earthquake such as stock pile water and dried food. ● Drills take place in public buildings such as schools and hospitals so that people know what to do in the event of an earthquake. This helps to reduce the impact and increases their chance of survival. ● Retro-fit existing buildings with counter-weights and use fire proof materials. ● Ensure that emergency services are fully trained to cope with the earthquake. ● Strengthen important transport infrastructure such as overhead roads and bridges.	8

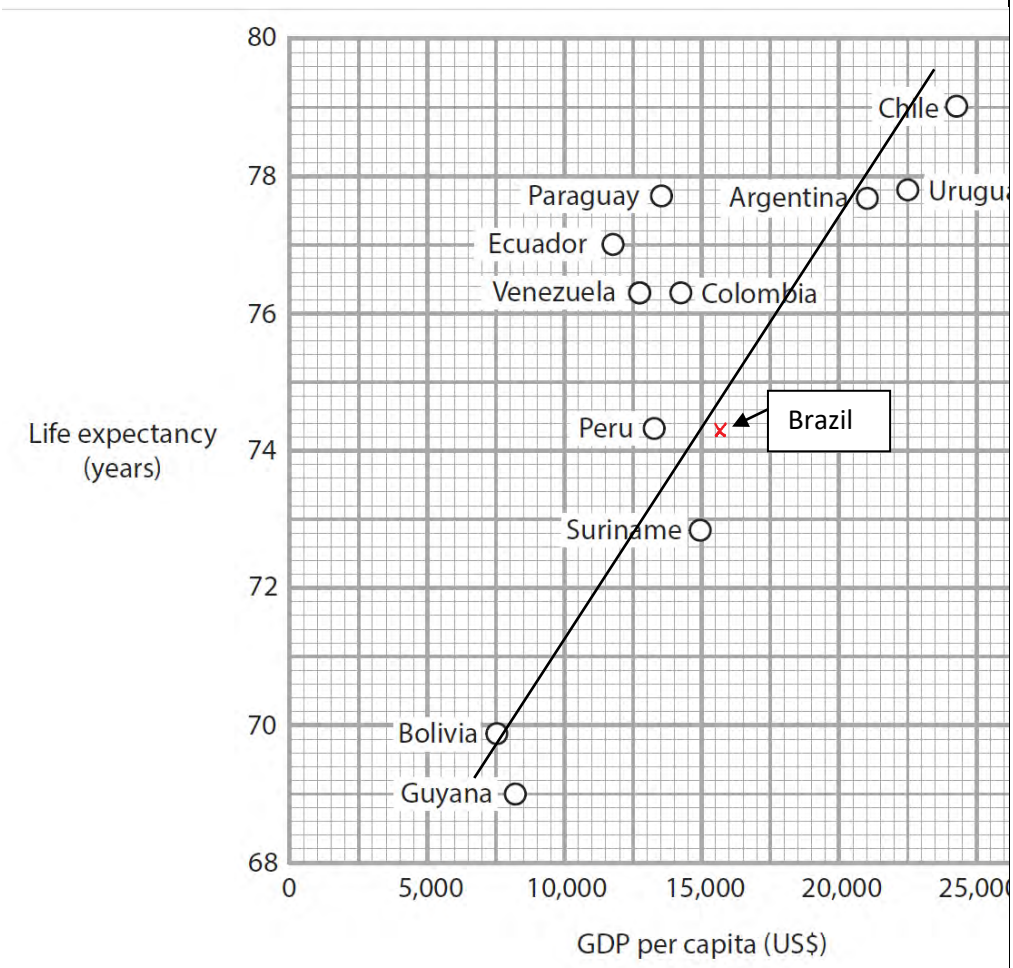
	● In Haiti, emergency response teams were mobilised. ● In the aftermath of the Haiti earthquake, there was a shortage of temporary housing. Expect students to include specific case study detail to access 4 marks in AO2. Volcano ● Create an exclusion zone around the volcano as was the case in Montserrat. ● Ensure that an evacuation plan is in place for residents in the immediate vicinity of the volcano. ● Ensure that diversion channels have been dug to divert lava away from settlements at the base of the volcano. ● Educate the population regarding the need to have supplies of bottled water and fresh food. ● Ensure the means are in place to inform the population about an imminent volcanic eruption. ● Build volcanic bomb shelters in close vicinity to the volcano. Expect students to include specific case study detail to access 4 marks in AO2. AO3 (4 marks) ● Judgement regarding the overall effectiveness of the preparation strategies. For example, many people died in the Sinabung volcano as many locals did not know as what to do when the volcano erupted, mainly because it had been dormant for hundreds of years. ● Judgement regarding the difficulties developing and emerging governments face when attempting to prepare their populations for such events including poverty and corruption. ● Judgement regarding the effectiveness of educating the population as to what to do in a seismic or volcanic event. ● Judgement regarding the effectiveness of technology to predict and subsequently prepare for volcanic events.	

	● Judgement about the effectiveness of subsequent preparation measures put in place following an earthquake or volcano e.g. diversion channels have been dug on the slopes of Mt. Sinabung to protect villages from a future volcanic event. ● Judgement about the effectiveness of the response measures put in place following an earthquake or volcano. For example, in Haiti, despite a massive effort, aid was distributed unequally between the capital, Port-au-Prince and surrounding rural areas. Expect students to include specific case study detail to access 4 marks in AO3.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Question number	Answer	Marks
2a (i)	B – Corruption index is a political measure of development. All other answers are incorrect. A – Gross domestic product (GDP) is an economic indicator of development. C –Life expectancy is a social measure of development. D – Fertility rate is a social measure of development.	1
2a (ii)	D - The number of deaths under one year of age per 1000 live births in a year. All other answers are incorrect. A - The number of deaths per 1000 women while pregnant per year. This is the maternal mortality rate. B - The number of deaths per 1000 school children in a year. An incorrect answer with no terminology. C - The number of deaths per 1000 of the population in a year. This is the death rate.	1

2b (i)	Award 1 mark for accurately plotting the data for Brazil on the scattergraph. If the plot is in the square shown then award the mark.  **Figure 4**	1

2b (ii)	Award 1 mark for each stage of the calculation. Award 1 mark for identifying the correct figures for the calculation (69-79) and award a further mark for the correct difference of 10 years. 79-69 = 10	2
2b (iii)	Award one mark for an accurately drawn line of best fit with between 5-7 plots either side of the line. For example:  **Figure 4** Please note that the plotted line does not have to begin at the junction of the two axes.	1

2b (iv)	Award 1 mark for identifying a reason why life expectancy rises and a further mark for explanation of that point. ● An increased number of hospitals / doctors (1) improves the quality of medical care. (1). ● Improving access to clean water (1) means diseases are less common (1). ● Improving diets/nutrition (1) means less death due to famine (1). ● Improving levels of education (1) mean the population is more mindful of the need to be healthy (1). ● A rising GDP means often means rising incomes (1), meaning more money can be spent on healthcare (1). No mark for simply stating that the country gets wealthier. Accept any other appropriate response.	2
2c (i)	Award 1 mark for stating a piece of evidence which suggests that The Gambia is a developing country. ● It has a human development index score of 0.46 (1). ● It's HDI score is the 16th lowest in the world (1). ● The Gambia's main exports are peanuts and fish (primary products) (1).	1
2c (ii)	Award one mark for identifying a way The Gambia's climate may affect The Gambia's development and a further mark for explanation of that point. ● The dry season can lead to the death of crops (1), making it difficult for farmers to earn money (1). The Gambia's tropical climate makes farming difficult (1). The dry season restricts the growth of quantity of crops meaning farmers often do not earn a decent income (1). ● The wet season may lead to flooding (1). This can damage farmland and crops (1). ● The hot, dry conditions can lead to soil erosion (1), making it difficult to farm (1). ● The tropical climate attracts tourists (1), bringing in money to The Gambian economy (1) ● The tropical climate enables The Gambia to grow tropical fruits (1) enabling the country to earn money from selling these products (1). Accept any other appropriate response. No mark for simply stating an aspect of The Gambia's climate, for example it is very hot.	2

2c (iii)	Award one mark for identifying an element of Frank's dependency theory and further marks for explanation of why dependency restricts the development of poorer countries up to a maximum of three marks. ● Frank believed the development was about two types of nations – core and periphery (1). The developed core exports high value manufactured goods (1) whereas the poorer periphery exports primary products which are low in value (1). ● The economic core is developed whereas the periphery is developing (1). During the colonial period exploitation occurred (1) with the core exporting low-value primary products (1). ● Developing nations depend on the developed nations for manufactured goods (1), these are expensive (1). They export low value primary products (1). ● The Gambia exports peanuts and fish which are low value (1), whereas it imports manufactured products and fuel which are high value (1). This results in the country earning insufficient amounts of money (1). ● Trade rules are decided by wealthier nations (1), developing nations rely on the export of low-value primary products (1) whereas they import high-value manufactured goods (1). Accept any other appropriate response.	3
2d (i)	Award 1 mark for the calculation working out 139.9/757.8 x 100 and a further mark for the correct answer of 18.5% 139.9 (billion) / 757.8 (billion) x 100 (1) = 18.5%. (1)	2
2d (ii)	Award 1 mark for the identification of a suitable data presentation technique and another mark for description of the technique. ● A proportional flow map could be used (1) with arrows of different thicknesses representing the amount of export trade (1). ● A pie chart could be used (1) with the segments representing a percentage of US export trade (1). ● A stacked divided bar chart (1) with segments for each export destination (1). ● A choropleth map (1) colour coded to represent the amount of export trade for each country (1). Note: Divided proportional bar graphs are not acceptable as they are used in the figure. Note: Answer needs to be more specific than simply, 'a bar chart', a form of which is used in the figure. Accept any other appropriate response.	2

2d (iii)	Award one mark for identifying a change to foreign direct investment (FDI) since 1990 in terms of the amount, origin or type and an explanation of that change up to a maximum of 2 marks for each explanation. ● In India, the amount of FDI has increased considerably since 1990 (1), this is due to the government's programme of economic liberalisation in the early 1990s (1). ● By reducing import tariffs (1), companies mainly from Europe and the Americas were encouraged to invest in the country. (1) ● In China, special economic zones were established (1) which led to a growth in foreign direct investment (1). ● FDI has increased since 1990 (1) as TNCs look to take advantage of cheaper labour (1). ● There has been a rapid growth in manufacturing industries (1) with companies attracted by cheap labour (1). ● Companies are able to export goods with reduced or no tariffs (1) which led to a huge growth in investment mainly from the USA (1). ● In India there has been a huge growth in FDI (1) particularly in ICT related industries attracted by India's skilled workforce (1). ● Companies take advantage of tax breaks (1) and well-developed infrastructure (1). ● In China, there has been significant growth in FDI (1) with companies attracted by China's reduced export taxes (1). ● FDI has increased (1) with China's coastal ports making it easy to export goods (1). ● FDI has increasingly originated from emerging countries (1) as a result of an increased number of TNCs based in such countries (1). Accept any other appropriate response.	4

2e	AO2 content will vary depending on the chosen case emerging country and the examples used. AO2 4 marks / AO3 4 marks A02 4 marks ● Emissions from traffic in heavily congested urban areas has led to Delhi have amongst the highest levels of air pollution in the world. ● In rural areas of countries such as Nigeria, relatively untouched by economic development, burning fuelwood and biomass leads to high levels of air pollution. ● Dumping of industrial chemicals and agricultural waste has polluted China's rivers to the extent that over half of all rivers in the country are unsafe for human contact. ● Lack of environmental law enforcement often results in the illegal dumping of waste products. ● TNCs help to develop the infrastructure of the area in which they are based by constructing roads, improving power provision and telecommunications. ● In countries such as China, an environmental protection law came into effect in January 2015. This will hopefully lead to steady improvements in environmental quality in the country. ● Several emerging nations are world leader in the adoption of green technology with the government increasingly realising that economic growth and environmental damage are not compatible. ● Environmentalism is on the rise in emerging countries. Many pressure groups have emerged and governments are increasingly adopting environmental policies. AO3 4 marks ● Judgement regarding the most significant environmental impacts of economic growth in emerging countries, assessing positive and negative arguments. ● Judgement regarding the significance of the wider environmental impact of economic growth in emerging countries such as the greenhouse gas contribution of countries such as China and India. ● Judgement regarding the overall environmental impact of economic growth in emerging countries, assessing positive and negative arguments. ● Judgement regarding the significance of the changing perception of the population and government towards protecting the environment and the adoption of environmental policies.	8

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* ● Learners write nothing. ● Learner's response does not relate to the question. ● Learner's achievement in SPaG does not reach the threshold performance level, for example severe errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* ● Learners spell and punctuate with reasonable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a limited range of specialist terms as appropriate.
SpaG 2	2-3	*Intermediate performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a good range of specialist terms as appropriate.
SpaG 3	4	*High performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with effective control of meaning overall. ● Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
3a (i)	C is the correct answer. The movement of people from urban to rural areas. All other answers are incorrect. A The movement of people from rural to urban areas. This is rural to urban migration. B The movement of people from one part of the city to another. This answer is incorrect. D The movement of people from suburban areas to the city centre. This is re-urbanisation.	1
3a (ii)	Award 1 mark for the identification of a reason for counter-urbanisation and a further mark for explanation. Typically answers may follow the format of an urban push and rural pull factor. ● High land values in city centre locations (1) resulted in people moving to rural areas where land was cheaper (1). ● Congestion (1) encouraged people to move to rural areas where air quality was much improved (1). ● The improvement in road networks / expansion of subway/underground (1) enabled people to live much further from their place of work (1). ● High crime rates (1) led to the movement of people to rural areas where neighbourhoods were deemed safer (1). No mark for simply stating people move to rural areas. Accept any other appropriate response.	2

3b	Award 1 mark for identifying a characteristic of urban land use and a further mark for explanation of the characteristic identified. ● Commercial land uses are found in city centre locations (1) because they can afford the high rental costs (1). ● Residential land use dominates in the suburbs (1) where land is cheaper (1). ● Terraced houses are common in former industrial areas (1) due to the fact that workers lived close to their place of employment (1). ● Retail estates may be found on the edge of cities (1) as land is cheaper (1). ● Shopping centres are often found on the outskirts of urban areas (1). Here, accessibility is good from nearby roads/motorways (1). ● New housing estates are often found on the edge of cities (1) as there is available land (1). ● New housing / retail developments can be found close to city centres (1) as a consequence of regeneration programmes (1). Take care not to double credit the same explanatory point, for example, accessibility is good. Accept any other appropriate response.	4
3c (i)	B – 40-50% All other responses are incorrect.	1
3c (ii)	Award one mark for each comparative statement identifying changes in the urban populations of African countries between 1990 to 2050 up to a maximum of 3 marks. ● In Egypt, the urban population in 1990 was 40-50%. By 2050, this figure is forecast to rise to 50-60% (1). ● The urban population growth rate differs between African countries (1). ● Some countries are forecast to see a growth rate of 30-40% whereas for others it is 50% (1). ● The urban population percentage for all countries in Africa is forecast to rise between 1990 to 2050 (1). Accept any other appropriate response. Max 2 if no use of data. Only award 1 data mark. Must use data from either figure 7a or 7b to score max marks.	3

3c (iii)	Award one mark for identifying a valid reason why forecasted rates of urban populations vary from country to country and further marks for explanation of the reasons given up to a maximum of three marks. ● Rural to urban migration in poorer countries will lead to a growing urban population (1) in countries like Egypt where it is set to rise in the region of 40-50% (1). Urban areas offer more opportunities combined with rural push factors (1). ● Forecasted growth rates in urban populations are lower in developed nations which already have a mainly urban population (1). In countries such as the UK where the urban population is forecast to be 90-100% (1) urbanisation happened most rapidly in the industrial revolution (1). Accept any other appropriate response. Max 2 if no use of data. Must use data from Figure 7a or 7b to score max marks.	3
3d (i)	Award 1 mark for each stage of the calculation. Award one mark for the calculating the number of people per toilet in 2019 and a further mark for the difference in the number of people per toilet between 2009 to 2019. 2019 650000/1250 = 520 (1). Change from 2009 to 2019 = (680-520) 160 (1).	2
3d (ii)	Award one mark for a reason why slum housing is constructed and a further mark for extension up to a maximum of two marks. ● There are insufficient amounts of housing for new migrants in urban areas (1). People must therefore construct their own accommodation using basic materials (1). ● New migrants cannot afford housing in urban areas (1). Therefore they construct temporary housing using low cost building materials (1). ● There is inadequate sewerage to cope with large numbers of people (1). This means that open sewers / polluted streams develop (1). ● Migrants cannot afford to live in desirable areas (1) therefore they build slums on low-lying / marginal land. (1). ● The population of a megacity rises too quickly (1) therefore the authorities cannot provide enough adequate housing (1). Accept any other appropriate response.	2

3e	Award 1 mark for correctly identifying an advantage of a named top down development projects and a further mark for explanation of that advantage up to a maximum of two marks each. ● Vision Mumbai provided piped water and sewerage to newly constructed flats (1). This improved the health of the local residents (1). ● The New Cairo Capital project in Egypt will provide housing for up to 5 million people (1). This is forecast to reduce the number of people living in overcrowded slum conditions (1). ● The Sao Paulo Masterplan will include many bus lanes encouraging the use of public transport (1). This reduces the traffic congestion in the city (1). ● The Chengdu Great City project has devoted half of its road space to pedestrian traffic (1) reducing traffic use and improving air quality (1). Accept any other appropriate response.	4
3 (f)	AO2 content will vary depending on the chosen case emerging country and the examples used. AO2 (4 marks) / AO3 (4 marks) AO2 (4 marks) ● Mumbai faces the challenges of its transport infrastructure being hugely overcrowded. Every year, over 3000 people die on its train network and traffic congestion helps to contribute to Mumbai being in the top 30 cities in the world for poor air quality. ● A lack of affordable housing leads to many migrants to Lagos ending up in squatter settlements such as Makoko in Lagos. In such settlements, mainly as a consequence of lack of access to safe drinking water disease is common, ● Megacities find many job opportunities mainly in the informal economy. In New Delhi, former shanty town migrant entrepreneurs have established a company specialising in the recycling of e-waste products. ● Infrastructure provision can vary enormously across a city with authorities lacking the resources to provide city-wide coverage. For example, some areas may be connected to a water supply or electricity network whereas some more informal settlements may not have such facilities.	8

	AO3 (4 marks) ● Judgement about which of the challenges has the greatest impact on life in a megacity. ● Judgement regarding the nature of the opportunities available in megacities and which are the most significant. ● Evaluative comments comparing the significance of challenges against the opportunities. ● Overall judgement as to whether megacities provide more significant opportunities or challenges for their population.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)

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Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | Candidate Number

Time 1 hour 30 minutes

Paper reference **1GB0/01**

Geography B

PAPER 1: Global Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.
- Good luck with your examination.

Turn over ▶

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SECTION A

Hazardous Earth

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1, which shows changing levels of carbon dioxide in the atmosphere between 1960 and 2020.

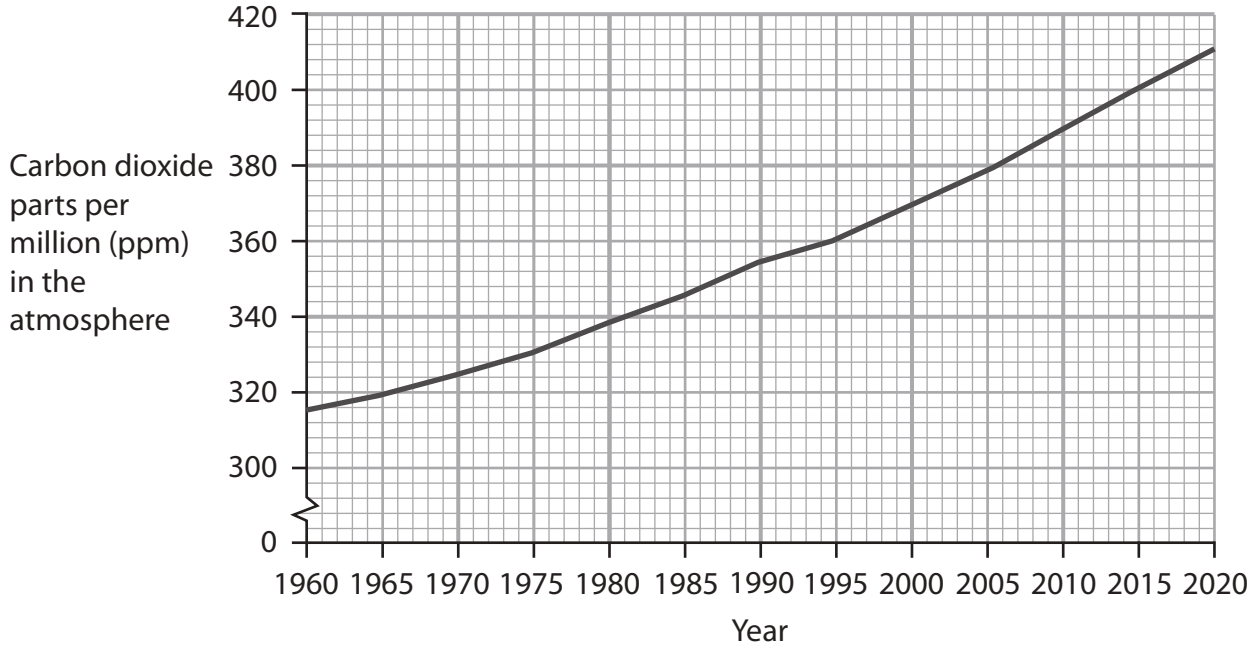


Figure 1

(a) (i) Identify the year in which the amount of carbon dioxide in the atmosphere reached 400 parts per million (ppm).

(1)

☒ **A** 2015

☒ **B** 2000

☒ **C** 1995

☒ **D** 1990

(ii) Calculate the amount by which carbon dioxide (ppm) increased between 1960 and 2020.

(1)

..... ppm

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(iii) State **two** human activities which cause the enhanced greenhouse effect.

(2)

1 .....

2 .....

(b) Explain **one** piece of evidence which suggests human activity is causing climate change.

(2)

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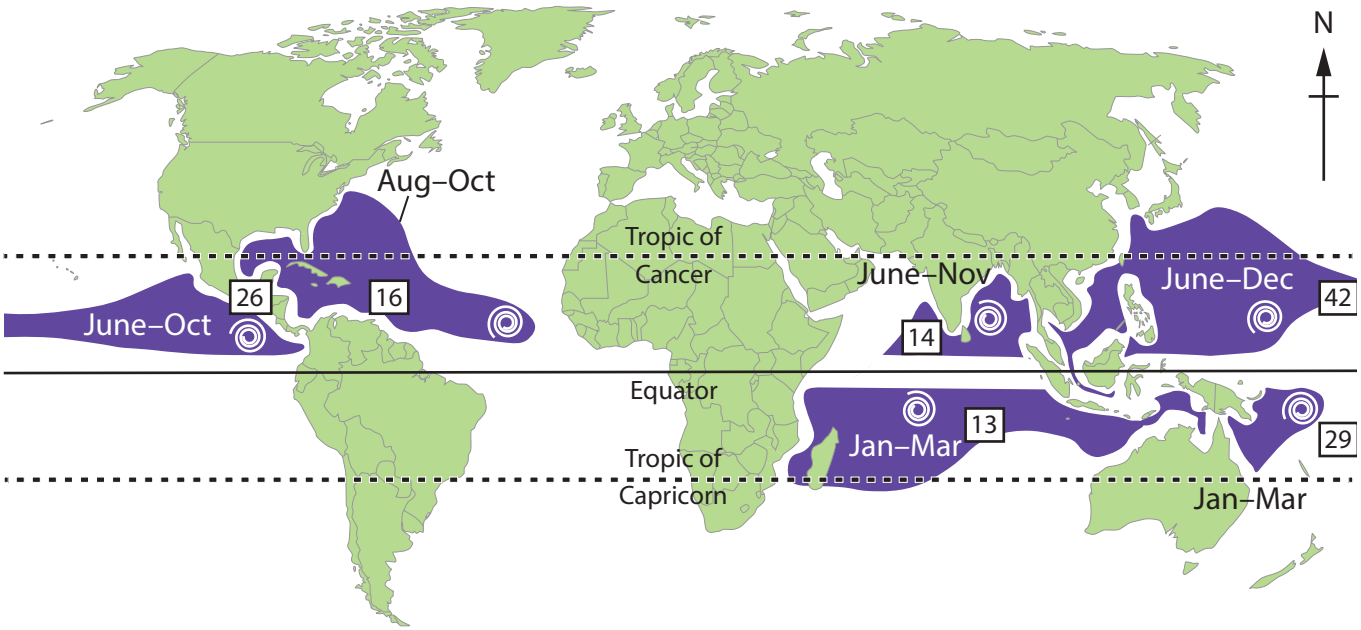
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(c) Study Figure 2, which is a map showing the distribution of tropical cyclone source areas and the number of tropical cyclones in 2018.



Key:

- Source areas of tropical cyclones
- 16 — Number of tropical cyclones in the source area in 2018
- June–Oct — Months when tropical cyclones are most likely

Figure 2

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(i) Identify the period when tropical cyclones are most likely to affect the East coast of the USA.

(1)

- ☒ **A** June–Oct
- ☒ **B** Aug–Oct
- ☒ **C** Jan–Mar
- ☒ **D** June–Dec

(ii) There was a global total of 140 tropical cyclones in 2018.

Calculate the percentage of tropical cyclones occurring in the northern hemisphere in 2018.

(2)

Show your working.

..... %

(iii) Using Figure 2, explain the distribution of tropical cyclone source areas.

(3)

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(iv) Describe how satellite imagery can be used to assess the impact of tropical cyclones.

(2)

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(d) Study Figure 3, which is a map showing the Indonesian earthquake and tsunami which occurred in September 2018.

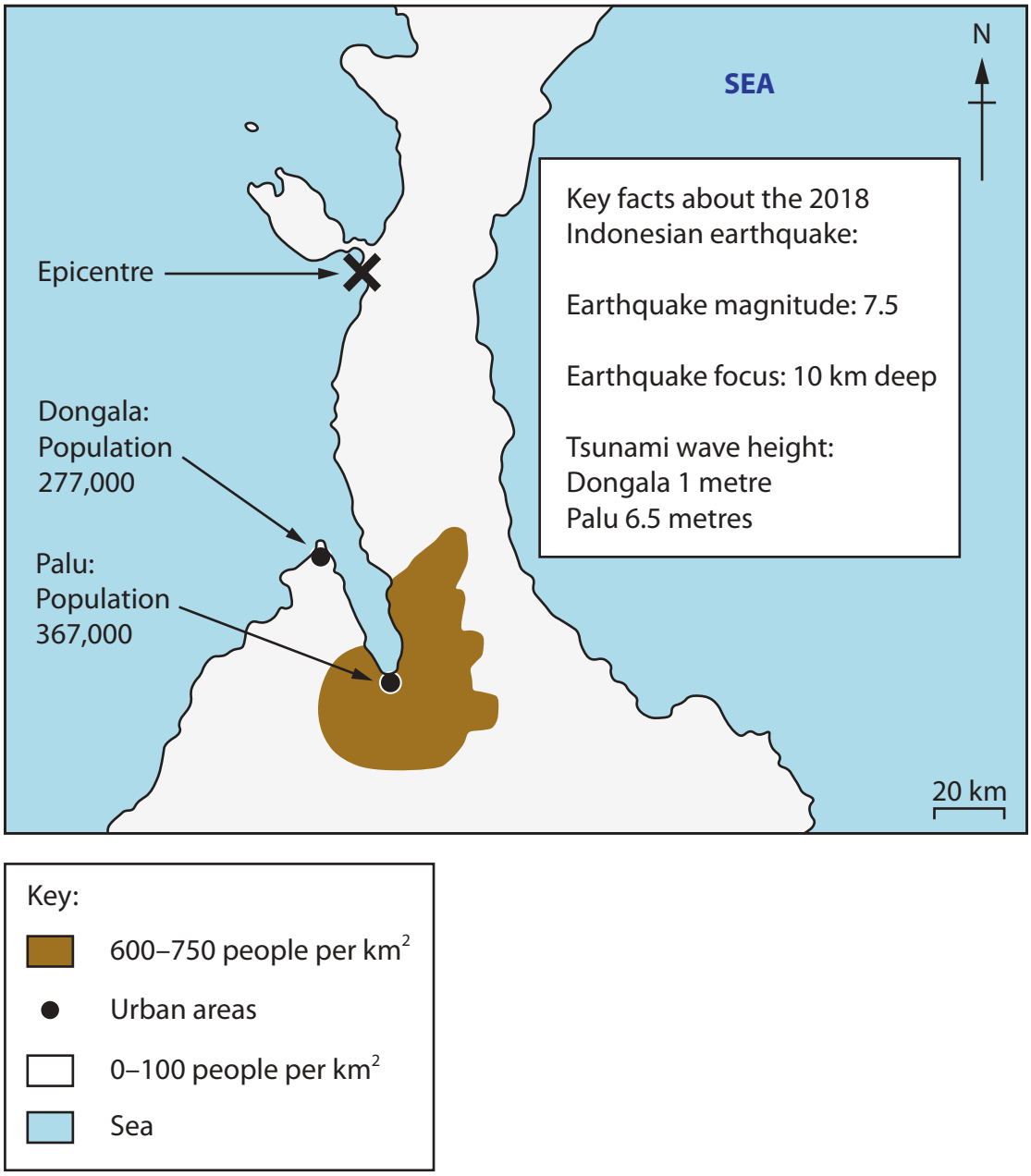


Figure 3

(i) Explain how earthquakes can cause tsunamis.

(2)

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(ii) Using Figure 3, suggest **two** reasons why many deaths occurred in Palu following the earthquake.

(4)

1 .....

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2 .....

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(e) Explain **one** difference between shield and composite volcanoes.

(2)

You may use a diagram to help your answer.

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(f) Evaluate the effectiveness of the management of a volcanic or earthquake hazard in **either** a named emerging **or** developing country.

(8)

Named emerging or developing country

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(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

SECTION B

Development Dynamics

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and the use of specialist terminology will be assessed in (e).

2 (a) (i) Identify which **one** of the following is a political measure of development.

(1)

☒ **A** gross domestic product (GDP) per capita

☒ **B** corruption index

☒ **C** life expectancy

☒ **D** fertility rate

(ii) Identify which **one** of the following is a definition of **infant mortality rate**.

(1)

☒ **A** The number of deaths per 1000 women while pregnant in a year.

☒ **B** The number of deaths per 1000 school children in a year.

☒ **C** The number of deaths per 1000 of the population in a year.

☒ **D** The number of deaths per 1000 children under the age of 1 in a year.

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(b) Study Figure 4, which shows GDP per capita (US$) and life expectancy (years) for South American countries.

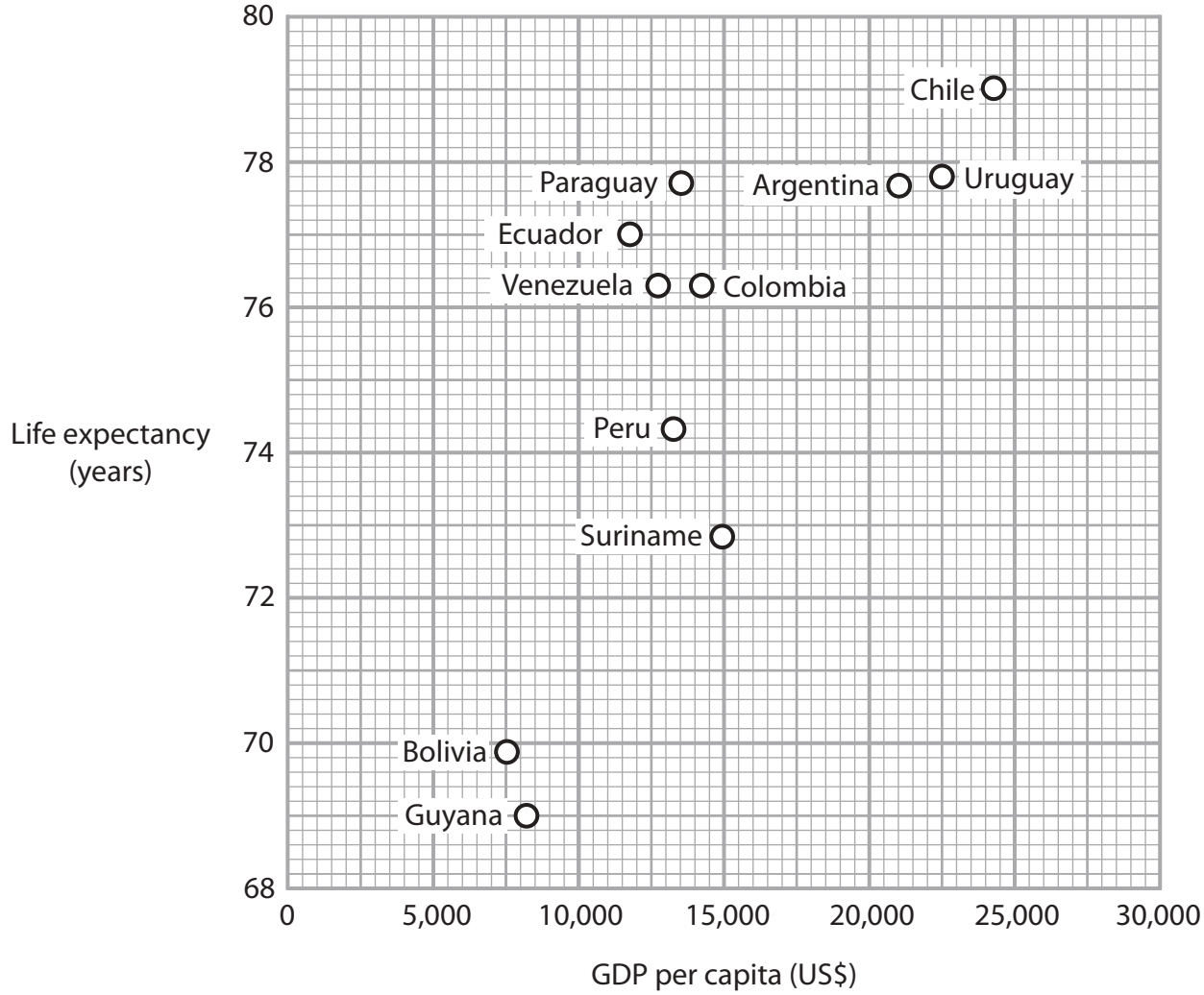


Figure 4

Brazil has a GDP per capita (US$) of 15,600 and a life expectancy (years) of 74.3.

(i) Plot this data on Figure 4.

(1)

(ii) Calculate the range of the life expectancy in the countries of South America.

Show your workings.

(2)

..... (years)

(iii) Using Figure 4, draw a line of best fit.

(1)

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(iv) Explain **one** reason why life expectancy often rises as the GDP per capita of a country increases.

(2)

(c) Study Figure 5, which gives information about The Gambia, which is a country in Africa.

Factfile: The Gambia

The Gambia is the smallest country in mainland Africa. The country has a tropical climate, with a rainy season from June to November. There is very little rain in the other months. In 2018, The Gambia had a human development index score of 0.46, which was the 16th lowest in the world.

Up until 1965, The Gambia was a colony of the United Kingdom. In 1994, the Gambian military took control of the country from the elected government. The military government immediately banned political parties from elections for seven years. The Gambia's main exports are peanut products and fish, with its main imports being manufactured products and fuel.

Figure 5

(i) Using Figure 5, give **one** piece of economic **or** social evidence which suggests that The Gambia is a developing country.

(1)

(ii) Explain **one** reason why The Gambia's climate may affect its development.

(2)

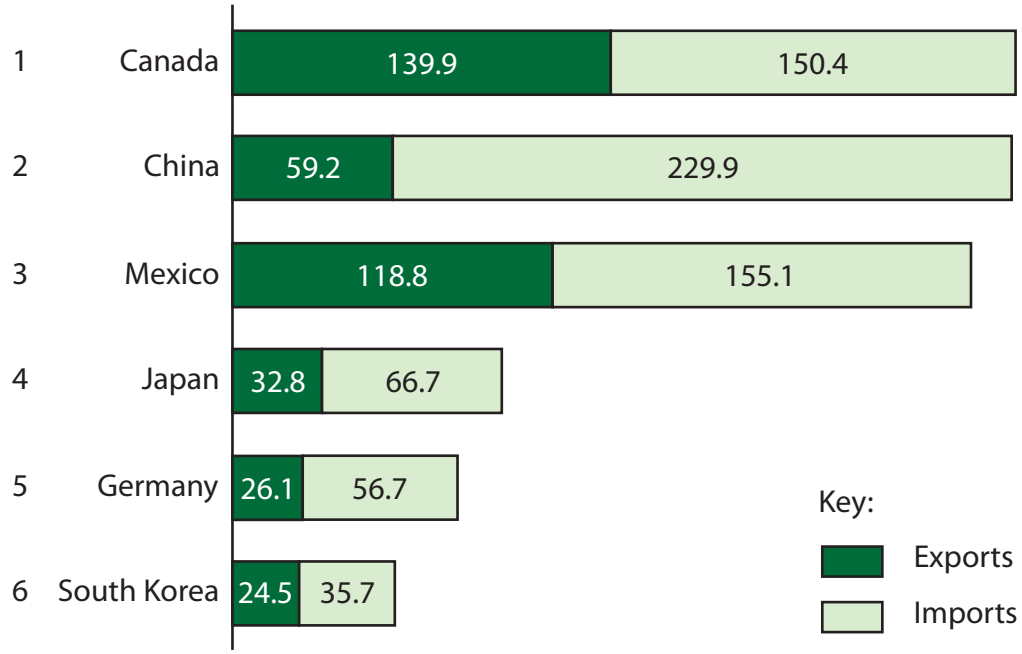
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(iii) Explain how Frank's dependency theory can be used to explain how countries such as The Gambia find it difficult to develop.

(3)

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(d) Study Figure 6, which shows the value of trade between the United States and its six most important trading partners from January to June 2017.



All figures are in billions of United States dollars (US$)

Figure 6

(i) The total value of US export trade was 757.8 billion US$.

Calculate the percentage value of export trade with Canada.

(2)

Answer to **one** decimal place.

Show your working.

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(ii) Describe another data presentation technique which could be used to show the destination of the USA's exports.

(2)

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(iii) For a named emerging country, explain **two** reasons why foreign direct investment (FDI) has changed since 1990.

(4)

Named emerging country

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

***(e)** For a named emerging country, assess the view that economic growth always has a negative impact upon the environment.

(8)

Named emerging or developing country

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(Total for spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 2 = 34 marks)

TOTAL FOR SECTION B = 34 MARKS

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SECTION C

Challenges of an Urbanising World

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 (a) (i) Identify which of the following is a definition of counter-urbanisation.

(1)

☒ **A** The movement of people from rural to urban areas.

☒ **B** The movement of people from one part of the city to another.

☒ **C** The movement of people from urban to rural areas.

☒ **D** The movement of people from suburban areas to the city centre.

(ii) Explain **one** cause of counter-urbanisation.

(2)

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(b) Explain **two** reasons why land use varies within cities.

(4)

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(c) Study Figures 7a and 7b.

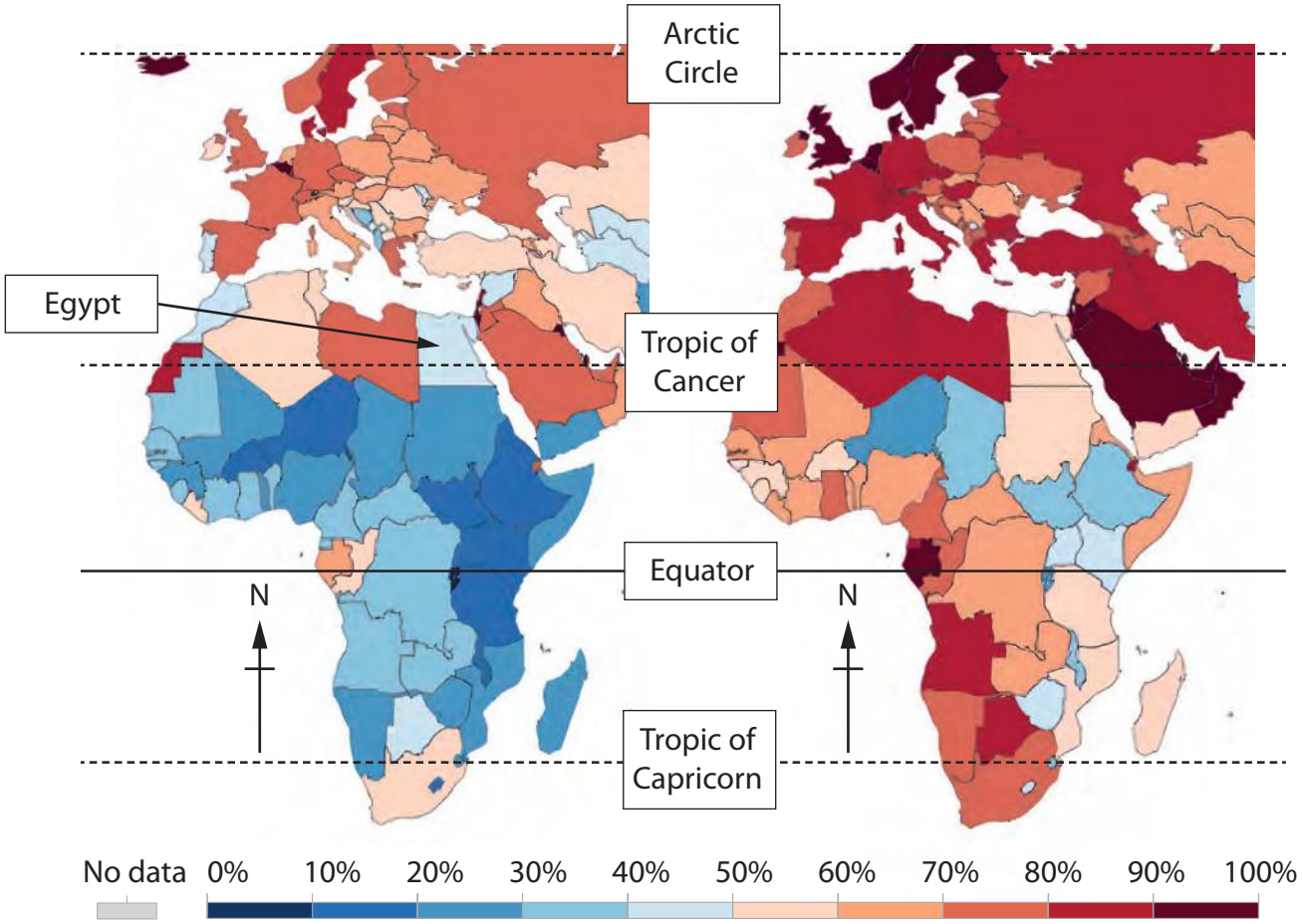


Figure 7a

Percentage of the population living in urban areas in 1990

Figure 7b

Predicted percentage of the population living in urban areas in 2050

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(i) Identify the percentage of the population of Egypt living in urban areas in 1990.

(1)

- ☒ **A** 20–30
- ☒ **B** 40–50
- ☒ **C** 50–60
- ☒ **D** 80–90

(ii) Using Figure 7, compare the percentage of people living in urban areas in African countries in 1990 and 2050.

Use data in your answer.

(3)

(iii) Using Figures 7a and 7b, suggest why the predicted percentage of the population living in urban areas varies from place to place in 2050.

Use data in your answer.

(3)

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(d) Study Figures 8a and 8b, which give information about Kibera, a squatter settlement in Nairobi, Kenya.



Figure 8a

An area of Kibera on low-lying land

	Number of toilets	Population
2009	250	170 000
2019	1250	650 000

Figure 8b

Results of a water improvement project in Kibera

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In 2009, there were 680 people per toilet in Kibera.

(i) Calculate the change in the number of people per toilet between 2009 and 2019.

(2)

Show your working.

.....

(ii) Explain **one** reason why squatter settlements, such as the one in Figure 8a, develop in megacities in developing and emerging countries.

(2)

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(e) For a named megacity, explain **two** advantages of a government-led top-down development strategy.

(4)

Named megacity

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(f) 'Megacities provide more opportunities than challenges for the people living there.'

Evaluate this statement for a named megacity in a developing **or** emerging country.

(8)

Named megacity

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(Total for Question 3 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

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Acknowledgements

Figure 2: Data from NASA

Figure 6 sourced from: https://www.statista.com/chart/10942/americas-most-important-trading-partners/

Figure 7a and 7b sourced from: ourworldindata.org

Figure 8 : © John Wollwerth/Alamy Stock Photo



Mark Scheme (Results)

Summer 2022

Pearson Edexcel GCSE

In Geography Spec B (1GB0) Paper 01

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question number	Answer	Marks
1(a)(i)	A Cairo has the lowest mean annual temperature. All other responses are incorrect.	1
1(a)(ii)	2865mm Maximum value is Libreville (2883mm). Minimum value is Cairo (18mm). The range is 2883mm-18mm = 2865mm	1
1(b)	Award 1 mark for identifying a factor contributing to high rainfall totals and further marks for explanation. There must be explanation/extension covering the movement of air to gain 3 marks. ● Low pressure areas have high rainfall totals (1) here, warm air rises (1), cools and water vapour condenses forming clouds. (1) ● For clouds to form, air must be rising (1) and cooling (1) this occurs in low pressure areas (1). ● Moist prevailing winds can result high rainfall totals (1). Winds which have travelled over the sea (1) pick up moisture. This can cause coastal areas to have high rainfall totals (1). ● Locations close to the boundary of the Hadley and Polar cells experience high rainfall totals (1), here, warm air rises (1) and cools and condenses forming clouds (1). ● Convection can cause high rainfall totals (1). The energy of the sun causes warm air to rise (1) cool and condense (1). ● Mountainous areas / areas of high relief can have high amounts of rainfall (1). Mountains cause the air to rise (1) causing it to cool and condense (1). Accept any other appropriate response.	3
1(c)(i)	Conservative or transform boundary.	1
1(c)(ii)	Award one mark for the idea of plates sliding past each other and a further mark for the idea of friction/pressure building up between the plates. ● Earthquakes occur as the plates attempt to slide past each other (1) this causes friction to occur (1). ● Stress is built up (1) as the plates try to move past each other (1). ● When the build-up of stress overcomes friction (1) the plates suddenly move past each other (1). Accept any other appropriate response.	2

1(c)(iii)	Award a maximum of one mark for identifying a cause of plate movement and further marks for the explanation of that cause of movement. ● Convection currents (1) generated by radioactive decay in the core generates heat (1) with the currents being able to pull the tectonic plates causing them to move (1). ● Convection currents (1) result in less dense magma rising (1) pushing the tectonic plates causing movement (1). ● Magma rises in the mantle (1) due to the decay of radioactive elements in the core (1). This causes convection currents (1). ● Convection currents (1) cause rising and falling magma (1) in a continuous cycle / circular motion (1).	3
	● Slab pull (1) occurs when dense ocean crust subducts (1) pulling the rest of the plate along with it (1). ● Ridge-push (1) occurs where newly formed crust acts under gravity (1) causing plates to push away from another (1). Accept any other appropriate response.	
1(d)(i)	C Tehran has the greatest forecasted increase in average temperate of 6.2°C. All other answers are incorrect.	1
1 (d) (ii)	Allow one mark for the candidate demonstrating how to work out percentage decrease and then another mark for the correct answer. Difference between original 2019 and forecast 2050 figure = 268mm Difference / original 2019 figure = 268/1554 x 100 Percentage decrease = 17.2%	2

1(d)(iii)	Allow 1 mark for each correctly identified reason why climate change is causing sea levels to rise and a further mark for explanation of that point. ● Rising temperatures (land/air temperatures) (1) are causing ice sheets / glaciers to melt (1) OR Glacial melt (1) which is adding water to the oceans (1). ● Warming ocean temperatures (1) causes the water to expand / thermal expansion (1). ● Sea water expands (1) taking up more space in ocean basins (1). ● Isostatic adjustment (1) can lead to land sinking leading to relative sea level rise. (1) Accept any other appropriate response.	4

1(e)	Award 1 mark for identifying a natural cause of_climate change and a further mark for explanation. ● Volcanic eruptions (1) can lead to a reduction in temperature as ash clouds reduce the amount of incoming solar energy (1). ● Sunspot activity / solar flares (1) result in more energy being emitted from the sun increasing temperatures (1). ● Asteroid collisions (1) can cause huge amounts of dust to block incoming sunlight reducing temperature (1). ● Orbital theory / Milankovitch Cycles (1) affect the amount of sun's energy the earth receives (1). ● The Earth's orbit is sometimes more circular/more oval (1). This influences the amount of sun's energy on earth (1). Accept any other appropriate response.	4

1(f)	AO2 (4 marks) / AO3 (4 marks) AO2 content will vary depending on the chosen tropical cyclones and physical hazard examples used. AO2 (4 marks) ● In 2019, intense strong winds from Hurricane Dorian reaching 185mph devastated Grand Bahama with most wooden structures totally destroyed. ● Coastal flooding can result as a result of strong on-shore winds causing water to 'pile up' against the coastline. ● Coastal flooding can be caused by storm surges where a low pressure system can cause sea levels to be considerably higher than normal. ● Storm surges result in the flooding of coastal areas, devastating farmland and leading to salt-water intrusion of freshwater sources. ● Storm surges can cause rapid coastal erosion and large waves caused by tropical cyclones can cause the sedimentation of tropical coral. ● Coastal flooding is largely a natural event, however human influences in coastal areas can exacerbate problems. ● A storm surge of over 7 metres devastated New Orleans causing extensive flooding in the Lower Ninth Ward. ● It is likely coastal flooding will become increasingly problematic as a result of rising sea levels caused by climate change. ● In more developed economies, the construction of various storm defences can reduce the overall impact of the tropical cyclone. ● Physical hazards can combine to intensify the overall impact for instance, heavy rainfall from tropical cyclones increases the likelihood of devastating landslides in the Philippines, much of which has steep topography and has experienced deforestation. ● Other physical hazards such as heavy rainfall can lead to serious flooding causing the overflow of sewerage and leading to the spread of mosquito-borne diseases. ● Increased surface runoff caused by heavy rainfall can flow into coastal estuaries, damaging marine environments. ● Strong winds can damage power infrastructure preventing communication and causing problems for the relief operation. ● Strong winds can devastate heavily forested regions causing tree falls and leaving debris to facilitate the spread of subsequent wildfires. Expect students to make the distinction between the different physical hazards caused by tropical cyclones to access 4 marks in AO2. A03 4 marks ● Judgement regarding the significance of impacts caused by coastal flooding. ● Judgement that the physical hazards caused by tropical cyclones are often more severe in poorer nations, often magnified by poor levels of preparation and the lack of finances to implement an effective disaster response.	8

	● Judgement regarding the significance of other physical hazards (strong winds, heavy rainfall, landslides). ● Judgement as to how local physical geography can influence the severity of the physical hazard for instance the fact that much of New Orleans lies below sea level intensified the impacts of the storm surge during Hurricane Katrina. ● Judgement regarding the significance of human activities at the coastline exacerbating the impact of physical hazards for instance, ineffective levee construction in the New Orleans area.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* ● Learners write nothing. ● Learner's response does not relate to the question. ● Learner's achievement in SPaG does not reach the threshold performance level, for example severe errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* ● Learners spell and punctuate with reasonable accuracy. ● Learners use rules of grammar with general control of maning overall. ● Learners use a limited range of specialist terms as appropriate.
SpaG 2	2-3	*Intermediate performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a good range of specialist terms as appropriate.
SpaG 3	4	*High performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with effective control of meaning overall. ● Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
2(a)(i)	B Life expectancy is a social measure of development. A Gross Domestic Product is an economic measure. C type of government is a political measure of development. D Gross National Income is an economic measure of development.	1
2(a)(ii)	Award 1 mark for correctly identifying how maternal mortality rates differ between countries and a further mark for explanation. ● Maternal mortality rates are higher in developing countries (1). This is because of a lack of health facilities to assist mothers with birth (1). ● Maternal mortality is lower in developed countries (1). Easy access to hospitals can assist with difficulties in pregnancy (1). ● Lower levels of development (1) often mean lower levels of health care (1). ● Access to healthcare differs between countries (1). Better healthcare reduces levels of maternal mortality (1). Allow credit for the indirect causes of maternal mortality such as the prevalence of HIV/AIDS or malaria related diseases which can lead to the death of mothers in the first year of a child's life. Accept any other appropriate response.	2
2(b)(i)	Allow one mark for demonstrating an understanding of the mean calculation. Total for Indian cities = 884 / 7 = 126.28 (1) Correct answer to one decimal place = 126.3 (1)	2
2(b)(ii)	There are a variety of possible correct answers here with no expectation that the candidates express their answer as 1:n Accept any answer from: 1:6 2:12 4:24 20:120	1

2(c)	Award one mark for identifying a positive consequence of economic development and a further mark for explanation. ● Reduced levels of pollution (1) as countries introduce environmental laws (1). ● Reduced levels of air pollution (1) as there is less reliance on fossil fuels (1). ● Reduction in levels of pollution (1) due to greater environmental awareness (1). ● The country is better off financially (1) therefore they invest in cleaning up the environment (1). ● Increased environmental awareness (1) mean more people can afford electric vehicles (1).	2
	● Decline of polluting industries (1) as a result of globalisation/ outsourcing due to a growth in tertiary / quaternary industries (1). ● Increasing levels of environmental protection (1) due to the growth of environmental awareness / green politics (1). Accept any other appropriate response.	
2(d)(i)	13.81 US $ 14.21 – US$ 0.4 = US$ 13.81	1
2(d)(ii)	Award one mark for a suitable data presentation technique and a further mark for a description of how the technique would be drawn. ● A line graph could be drawn (1) with years on the x-axis and trillions of US$ on the y-axis (1). ● A line graph (1) with a line representing each country could show changes between 1990 and 2019 (1). ● A bar graph (1) could be drawn with years on the x axis and trillions of US$ on the y-axis. (1). Accept any other appropriate response.	2

2(e)	Award one mark for correctly naming an advance in communication and further marks for how this has led to development in emerging countries. ● Containerisation (1) enables goods to be transported cheaply all around the world (1) which means goods can be produced in emerging countries (1) ● Global shipping has increased (1) goods can be produced cheaply in emerging countries (1) which provides an income for local people (1). ● Mobile phone technology (1) enables people to establish businesses (1) which creates jobs (1). ● Investment in the road network (1) enables goods to be transported more easily (1) and encourages foreign direct investment (1). ● Investment in transport infrastructure (1) encourages foreign direct investment (1) which creates jobs in emerging countries (1). ● Increasing global air connectivity (1) makes emerging countries desirable locations for business (1) as management can easily travel to overseas factories/offices (1). ● Improved broadband/internet provision (1) attracts business to the area (1) enabling them to communicate with offices/customers around the world (1). Max 2 if no advance in communications is mentioned. Accept any other appropriate response.	3

2(f)(i)	D 0-4 This is clearly the widest bar. All other answers are incorrect.	1

2(f)(ii)	Award one mark for identifying a characteristic of the South Sudan pyramid which is representative of that of a developing country and a further two marks for a suggested explanation of the identified characteristic. ● South Sudan has a low percentage of elderly people (1). This could be because of a poor health care system (1) contributing to a shorter life expectancy (1). ● South Sudan has a higher percentage of people in the 0-4 age group (1). This could be because birth rates are high (1) due to limited use of contraception (1). ● There is a youthful population (1) as a consequence of a low life expectancy (1) caused by a poor health care (1). ● There is a low expectancy (1) because of poor healthcare (1) due to a lack of investment in healthcare (1). ● South Sudan has a high percentage of people in the young age groups (1). This could be due to the need for children to work on farms (1) or to look after family in their old age (1). ● South Sudan has a lower percentage of people in their 30s (1). This could be due to emigration of people (1) due to a shortage of work (1) ● South Sudan's pyramid rapidly narrows (1). This may be due to people dying relatively young (1) as a consequence of inadequate health care (1). ● South Sudan's pyramid has a wide base (1). This suggest there is a high birth rate (1) which could be due to the lower levels of female education (1). ● The pyramid shows there is a low life expectancy (1) and therefore a youthful population (1) as a consequence of poor healthcare (1). Accept any other appropriate response.	3

2(g)	Award one mark for identifying a location factor which has influenced the development of the named emerging country and a further mark for explanation up to a maximum of 2 marks for each factor given. ● India's close proximity to the Middle East (1) enables it to easily import oil / gives it a growing market for its exports (1). ● India's location puts it 5 hours 30 ahead of UK time (1) this has made it an attractive location for company outsourcing aiming for a 24 - hour operation (1). ● India's coastal location (1), enables it to import / export goods (1). ● Some areas of India are landlocked / isolated (1) creating disparities within the country (1). ● China has a huge Pacific coastline (1) which enables easy trade with the USA (1). ● Whereas coastal areas in China have developed at a rapid rate (1) inland areas have lagged behind creating inequalities (1) ● Nigeria has rich oil deposits (1) the export of which has created a huge amount of revenue (1). ● Fertile soils close to major rivers (1) are excellent locations for crop production (1). ● Nigeria has a long coastline (1) enabling it to trade easily with many countries around the world (1). ● Northern India is mountainous (1) making it unappealing to investment by industry (1). ● China has several desert areas (1). Development in these areas has been restricted due to a lack of fertile soils / shortage of water (1).	4
	NB both positive and restrictive factors relating to a country's development should be credited. NB only allow the country's geographic location (e.g. coastal) and ease of trade, perhaps with a named trading partner once. Accept any other appropriate response.	

2(h)	AO2 4 marks / AO3 4 marks A02 4 marks ● Colonialism involved developed nations taking control over a dependent country. ● Neo-colonialism involves modern day methods of indirect control by developed nations on former colonies. ● Under colonial rule, many developing nations exported low-cost primary products to colonial powers, importing more expensive manufactured goods. ● This contributed to the underdevelopment of many nations. ● The idea that colonialism leads to global inequality was developed by Frank with his dependency theory. He believed that historical trade patterns have made countries poor with international trade rules established by the colonial powers. ● Post-independence, neo-colonialism has continued to widen global inequalities. For example, TNCs from developed nations operate in emerging countries with the majority of profits going back to the developed nation. ● Trade agreements often heavily favour developed nations and are restricting the growth of developing nations. ● Other factors have also contributed to global inequalities. ● Environmental factors also contribute to global inequalities for instance, harsh climates and difficult topography restrict a country's ability to develop. ● Systems of governance contribute to global inequalities, for instance corrupt governments may misuse government money. ● International relations may contribute to global inequalities, for instance international sanctions placed against the Iranian government, restricting their development. AO3 4 marks ● Judgement regarding the importance of colonialism and neo-colonialism as a means of creating global inequalities. ● Judgement regarding the relative significance of colonial rule versus neo-colonial policies in creating global inequalities. ● Judgements that whereas countries may now be independent, neo-colonialism continues to widen global inequality. For instance, China's investments in Africa may be reinforcing a dependency on commodity exports. ● Judgements regarding the relative importance of other factors which have influenced a countries development such as environmental factors and systems of governance. ● Overall evaluation regarding the extent to which colonialism and neo-colonialism have created global inequalities.	8

Level	Mark	Descriptor
	0	● No acceptable response
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Question number	Answer	Marks
3(a)(i)	Asia.	1
3(a)(ii)	The answer is 29%. Also accept -29%. Europe's % share of the world's urban population in 1950 is 38%. In 2050 its projected share decreases to 9%.	1
3(a)(iii)	Award one mark for correctly demonstrating how to work out 20% of 6.5 billion. Award a further mark for the answer expressed in billions. 6.5 x 0.2(1) = 1.3 (1). OR 20 x 6.5/100 (1) = 1.3 (1). OR 6.5 x 20 = 130 (1). 130/100= 1.3 (1) OR 20/100 x 6.5 (1) = 1.3 (1) OR 6,500,000,000 x 20 = 130,000,000,000 (1). 130,000,000,000 / 100 = 1,300,000,000 (1) OR 10% of 6.5 = 0.65 (1). 0.65 x 2 = 1.3 (1) Accept any other appropriate method showing how to work out 20% of 6.5 billion.	2

3(b)	Award one mark for identifying a reason why cities may experience population decline and a further mark for explanation of that reason has occurred. ● Counterurbanisation (1) occurs as people leave cities for reasons such as high levels of pollution / crime / the desire for a quieter way of life (1). ● Decentralisation (1) causes people to leave cities as businesses locate at the edge of cities (1). ● Deindustralisation (1) lead to mass unemployment causing people to leave cities looking for work (1). ● People are increasingly moving to rural areas (1) as the cost of housing in cities continues to rise rapidly (1) ● The growth in working from home / hybrid working (1) has led to decline as it is cheaper to live in rural areas / outside of cities. (1) ● Natural disasters (1) can lead to people seeking to leave vulnerable urban areas (1). Accept any other appropriate response.	2
3(c)	Award one mark for each correctly drawn line up to a maximum of two marks. (2) Award a further mark for correctly labelling the three additional sectors if the two lines have been correctly drawn. (1) Countries can be plotted in any order. It is not necessary to add the percentage figure. Allow tolerance 1mm +/- either side of the correct position of the lines. NB If no labelling but all segments correct then max 2.	3
3 (d)	Award one mark for identifying an impact that regeneration has on the population numbers in an area and a further mark for explanation of the change. ● Regeneration causes the population to increase as jobs are created (1) which encourages migration into the area (1). ● Land use can change from residential to commercial (1) which leads to people moving out of the area (1) ● High density housing is replaced by lower density housing (1) leading to overall out migration (1). ● Old industrial buildings can be converted to residential use (1) which leads to in-migration and population growth (1). ● At first, the population of the area may decline as buildings are demolished (1) which sometimes force people to move out of an area (1). ● Regeneration can lead to an increase in house prices in an area (1) which encourages people to leave urban areas to move to cheaper locations (1). NB: A simplistic comment such as 'it grows' or 'it declines' requires explanation of the growth for 1 mark as illustrated in the above examples. Accept any other appropriate response.	2

3(e)(i)	B – Seoul. All other answers are incorrect. Seoul contributes 49.4% to national GDP Athens contributes 47.9% to national GDP Ottawa contributes 39% to national GDP Copenhagen contributes 40.3% to national GDP Accept any other appropriate response.	1
3(e)(ii)	Award 1 mark for identification of a broadly positive correlation and further marks for accurate use of data and identification of cities which either follow the general trend or are anomalous. The use of data may be non-numerical as in examples 1 and 2 below. ● Generally, as one variable goes up, so does the other (1). Ottawa does not fit the pattern (1). It has a low % of the national population but makes a large contribution to national GDP (1). ● There is a positive trend (1). Cities such as Washington DC have a low % of the national population and make a low contribution to national GDP (1). Whereas cities with a high % of the national population such as Seoul make a large contribution to national GDP (1). ● As the % of the national population living in the capital city goes up, so does the city's contribution to national GDP (1). For example, Athens has a high % of the national population living in the capital at around 28% (1) and makes a large percentage contribution to the country's GDP (1). Accept any other appropriate response. Note: Award a maximum of 2 marks if there is no use of data.	3
3(f)	C a city with very large economic and political influence All other answers are incorrect.	1
3(g)	Award one mark for identifying a difference between formal and informal employment and a further mark for explanation of the difference. ● Formal jobs require that workers pay tax on their earnings (1) as they work for regulated companies (1). ● Workers often pay no tax in informal employment (1) as people are self-employed (1). ● Informal jobs often involve irregular hours (1) as people are self-employed and can work when they choose (1). ● Formal jobs often have employment health and safety guidance in place (1) as it is a legal requirement for companies to do so (1). Accept any other appropriate response.	2

3(h)	Award a mark for correctly identifying a positive impact of a bottom-up development strategy and a further mark for explanation of this impact up to a maximum of two marks for each positive impact given. ● The local community are given a say in what is required (1) which leads to the most important problems being tackled (1).	4

	● Bottom-up strategies tend to have a low cost (1) this ensures that even the poorest societies / people can benefit from them (1). ●In Lagos, Edufood aims to improve food security for school students (1). This improves children's levels of concentration in class (1). ● They use appropriate technology (1) which can easily be repaired / used/ maintained by local people (1). ● They promote community cohesion (1) which make use of local expertise (1). ● The LSS charity in Mumbai improves sanitation (1) which has led to the improved health of local people (1). Accept any other appropriate response. Max 3 marks if the answer is generic and makes no specific reference to a bottom-up development strategy in a specific megacity. Note: No mark for simply naming a strategy.	

3(i)	AO2 (4 marks) / AO3 (4 marks) Answer depends on the megacity chosen but expect candidates to include references to rates of natural increase, national and international migration and economic investment) AO2 (4 marks) ● By developing large ports with associated industries, colonial powers began to stimulate the population growth of many modern megacities. ● Initially, population growth was comparatively slow. ● The population of Lagos grew by 3 million people between 1950-1980, this had risen to 7 million by 2000 and is believed to be over 20 million in 2022. ● Recent rapid population growth in Lagos has occurred due to large amounts of rural to urban migration fuelled by increased employment opportunities in the metropolitan area. ● Rural-urban migration has historically been important in the growth of Mumbai's population although in recent years there is evidence that the rate of this migration is slowing. ● Rural push factors such as poverty in areas such as Bihar have fuelled rural-urban migration to Mumbai. ● An increasing proportion of young people in Lagos has recently led to significant increases in the rate of natural increase. ● In 2010, it was estimated that 75% of Mumbai's migrant population were from rural area in India compared to 23% from urban areas with 2% having migrated internationally. ● By investing heavily in megacity infrastructure, governments make megacities more attractive destinations, attracting more people to them. ● Government investment in megacities can create a 'multiplier effect' leading to further subsequent investment and associated population growth. AO3 (4 marks) ● Judgement regarding the relative significance of past and present factors for growth. ● Judgement regarding the significance of national v international migration on population growth. ● Judgement regarding the significance of regional and government policies in the growth of the megacity. ● Judgement regarding the significance of push and pull factors. ● Judgement regarding the relative significance of factors which contribute to the population growth of the megacity. Accept any other appropriate response	8

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1GB0/01**

Geography B

PAPER 1: Global Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- In Section A answer **ALL** questions.
- Then answer **EITHER** Section B **OR** Section C.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

P70852A

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Q:1/1/1/1/1

P 7 0 8 5 2 A 0 1 2 8

Pearson

SECTION A

Hazardous Earth

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and use of specialist terminology will be assessed in Question 1(f).

1 (a) Study Figure 1 which shows climate data for selected cities in Africa.

City	Country	Mean annual rainfall (mm)	Mean annual temperature (°C)
Cairo	Egypt	18	21.3
Bamako	Mali	953	27.8
Libreville	Gabon	2883	26.2
Luanda	Angola	439	24.4

Figure 1

(i) Identify the city with the lowest mean annual temperature.

(1)

☒ **A** Cairo

☒ **B** Bamako

☒ **C** Libreville

☒ **D** Luanda

(ii) Calculate the range of mean annual rainfall shown in Figure 1.

(1)

..... mm

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(b) Explain **one** reason why some areas have high annual rainfall.

(3)

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(c) Study Figure 2 which shows the location of the San Andreas fault in North America.

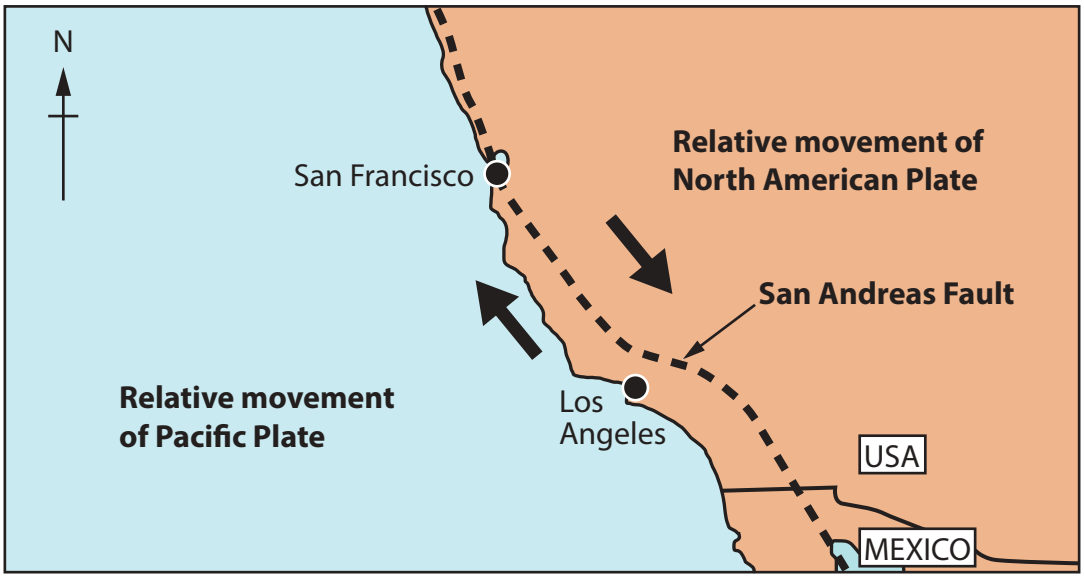


Figure 2

(i) Name the type of plate boundary shown in Figure 2.

(1)

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(ii) Explain why earthquakes are common at this type of plate boundary.

(2)

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(iii) Explain **one** reason why tectonic plates move.

(3)

(d) Study Figure 3 which shows projected changes to precipitation and temperature in selected Asian cities by 2050.

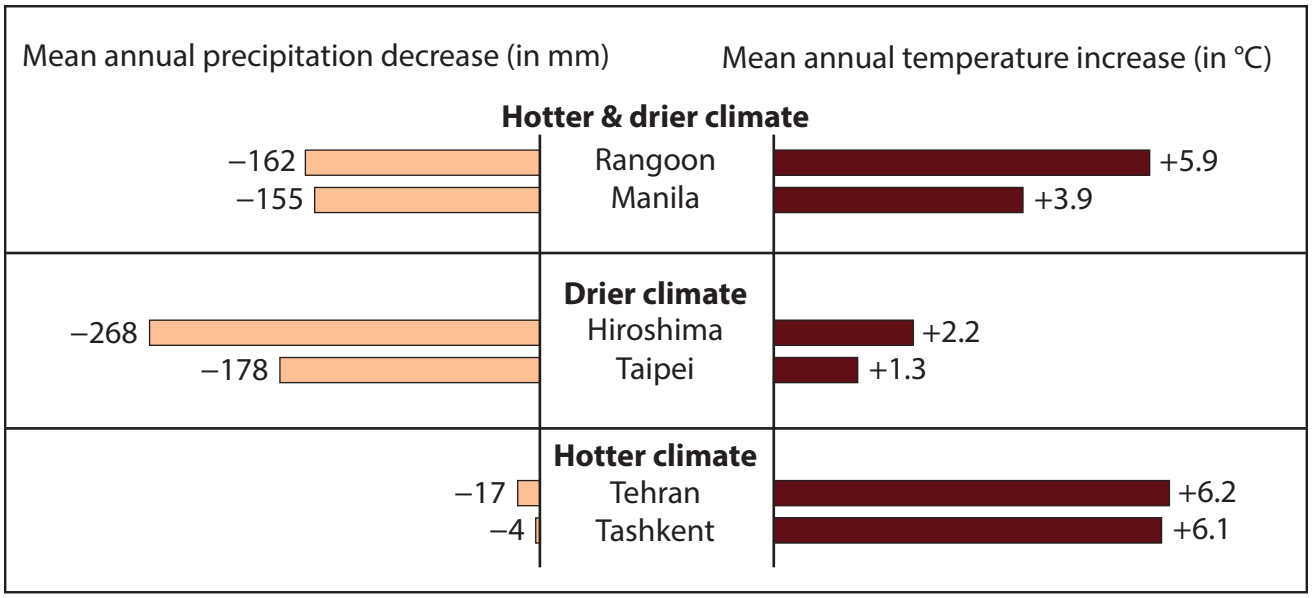


Figure 3

(i) Identify which city is projected to have the greatest increase in mean annual temperature by 2050.

(1)

- ☒ **A** Rangoon
- ☒ **B** Hiroshima
- ☒ **C** Tehran
- ☒ **D** Tashkent

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(ii) Study Figure 4 which shows information about Hiroshima's annual precipitation in 2019 and 2050 (projected).

	2019	2050 (projected)
Hiroshima annual precipitation (mm)	1554	1286

Figure 4

Calculate the projected percentage (%) decrease in Hiroshima's precipitation.

Give your answer to one decimal place.

You must show your working.

(2)

..... %

(iii) Explain **two** ways in which climate change causes sea levels to rise.

(4)

1 .....

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2 .....

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(e) Explain **two** natural causes of past climate change.

(4)

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2 .....

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(f) Assess the view that coastal flooding is the main physical hazard caused by tropical cyclones.

(8)

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(Total for spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 1 = 34 marks)

TOTAL FOR SECTION A = 34 MARKS

Answer EITHER Section B OR Section C.

SECTION B

Development Dynamics

If you answer Section B put a cross in the box ☒ .

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

2 (a) (i) Identify which **one** of the following is a social measure of development.

(1)

☒ **A** Gross Domestic Product

☒ **B** life expectancy

☒ **C** type of government

☒ **D** Gross National Income

(ii) Explain **one** reason why maternal mortality rates differ between countries.

(2)

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(b) Study Figure 5 which shows the cities in India with the highest mean annual levels of air pollution (measured in PM2.5) in 2018.

City	Mean annual level of air pollution (PM2.5)
Gurugram	135
Ghaziabad	135
Faridabad	129
Bhiwandi	125
Noida	124
Patna	120
Lucknow	116

Figure 5

(i) Calculate the mean annual level of air pollution shown in Figure 5.

Answer to one decimal place.

You must show your working.

(2)

..... PM2.5

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(ii) In 2018, the Chinese city of Sanya had a mean annual level of air pollution of 20 (PM2.5).

Calculate the ratio of the level of pollution between Sanya and Patna (120 PM2.5) (Figure 5).

(1)

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(c) Explain **one** way that rapid economic development has a positive impact on the environment.

(2)

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(d) Study Figure 6 which shows the Gross Domestic Product (GDP) of five emerging countries in 1990 and 2019.

All figures are in trillions of US dollars (US$).

Emerging country	1990	2019
China	0.4	14.21
India	0.33	2.97
Brazil	0.46	1.96
Mexico	0.3	1.24
Indonesia	0.16	1.1

Figure 6

(i) Calculate the increase in China's GDP between 1990 and 2019.

(1)

..... trillion US$.

(ii) Describe another data presentation technique that could be used to show the changes in GDP shown in Figure 6.

You may use a diagram in your answer.

(2)

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(e) Explain **one** way advances in communications have helped the economic development of a named emerging country.

(3)

Named emerging country: .....

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(f) Study Figure 7 which shows the population pyramid for South Sudan, a developing country in Africa.

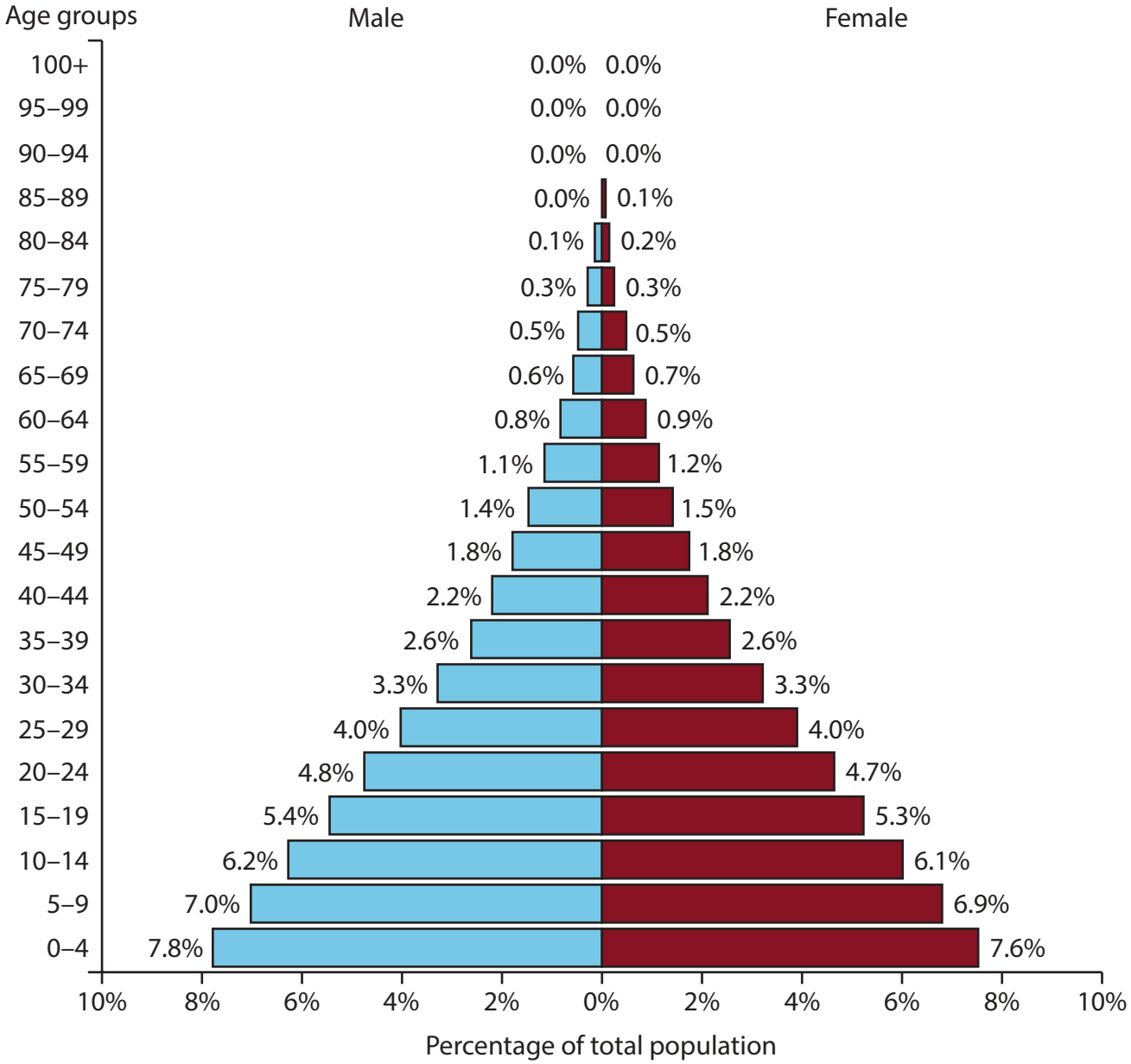


Figure 7

(i) Identify which **one** of the following is the modal age group in South Sudan.

(1)

- ☒ **A** 90–94
- ☒ **B** 45–49
- ☒ **C** 15–19
- ☒ **D** 0–4

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(ii) Suggest **one** way Figure 7 provides evidence that South Sudan is a developing country.

(3)

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(g) Explain **two** ways that the location of an emerging country you have studied has influenced its development.

(4)

Named emerging country: .....

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2 .....

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(h) Evaluate the importance of historical factors (colonialism and neo-colonialism) in the growth of global inequalities.

(8)

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(Total for Question 2 = 30 marks)

TOTAL FOR SECTION B = 30 MARKS

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Do not answer Section C if you have answered Section B.

SECTION C

Challenges of an Urbanising World

If you answer Section C put a cross in the box ☒ .

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 (a) Study Figure 8 which shows the share of the world's urban population by region in 1950, 2010 and the projected share in 2050.

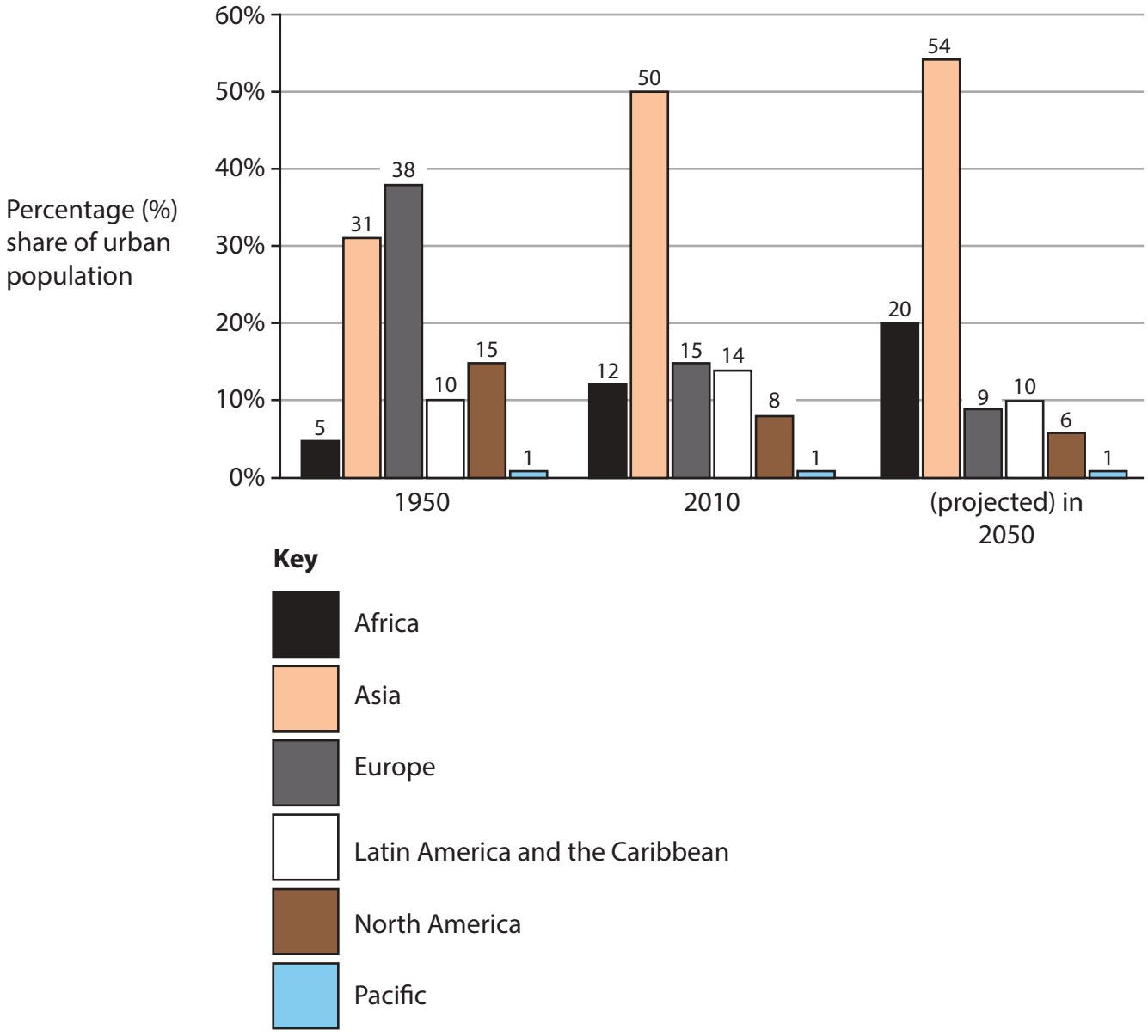


Figure 8

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(i) Identify the region with the largest share of the world's urban population in 2010.

(1)

.....

(ii) Calculate the projected decrease in Europe's percentage (%) share of the world's urban population between 1950 and 2050.

(1)

..... %

(iii) In 2050, globally there are forecast to be 6.5 billion people living in urban areas.

Calculate the number of people forecast to be living in urban areas in Africa in 2050.

You must show your working.

(2)

..... billion

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(b) Explain **one** reason why the population has fallen in some urban areas.

(2)

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(c) Study Figure 9, a pie chart showing the origin of international migrants living in Doha, the capital city of Qatar, in 2020.

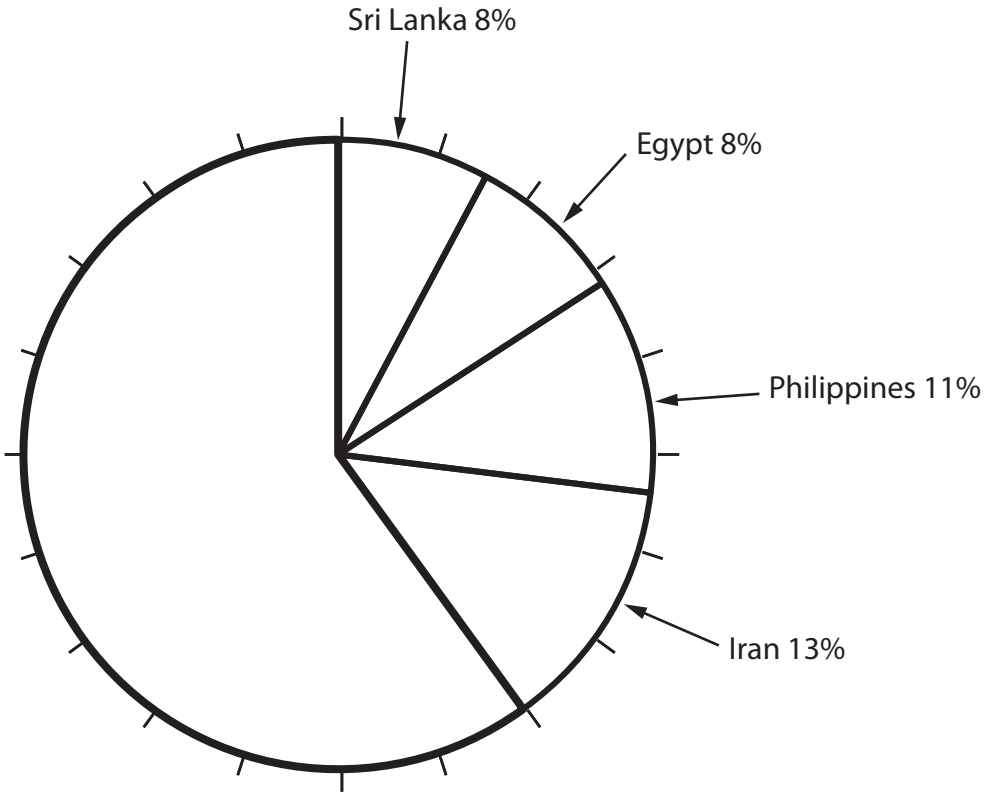


Figure 9

Plot the data from the table below to complete the pie chart in Figure 9.

(3)

Country of origin of migrants	Percentage (%) of total migrants in Qatar, in 2020
Nepal	15
India	25
Pakistan	20

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(d) Explain **one** impact of regeneration on the number of people living in urban areas.

(2)

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(e) Study Figure 10 which shows the percentage of a country's population living in the capital city, and the city's contribution to national GDP.

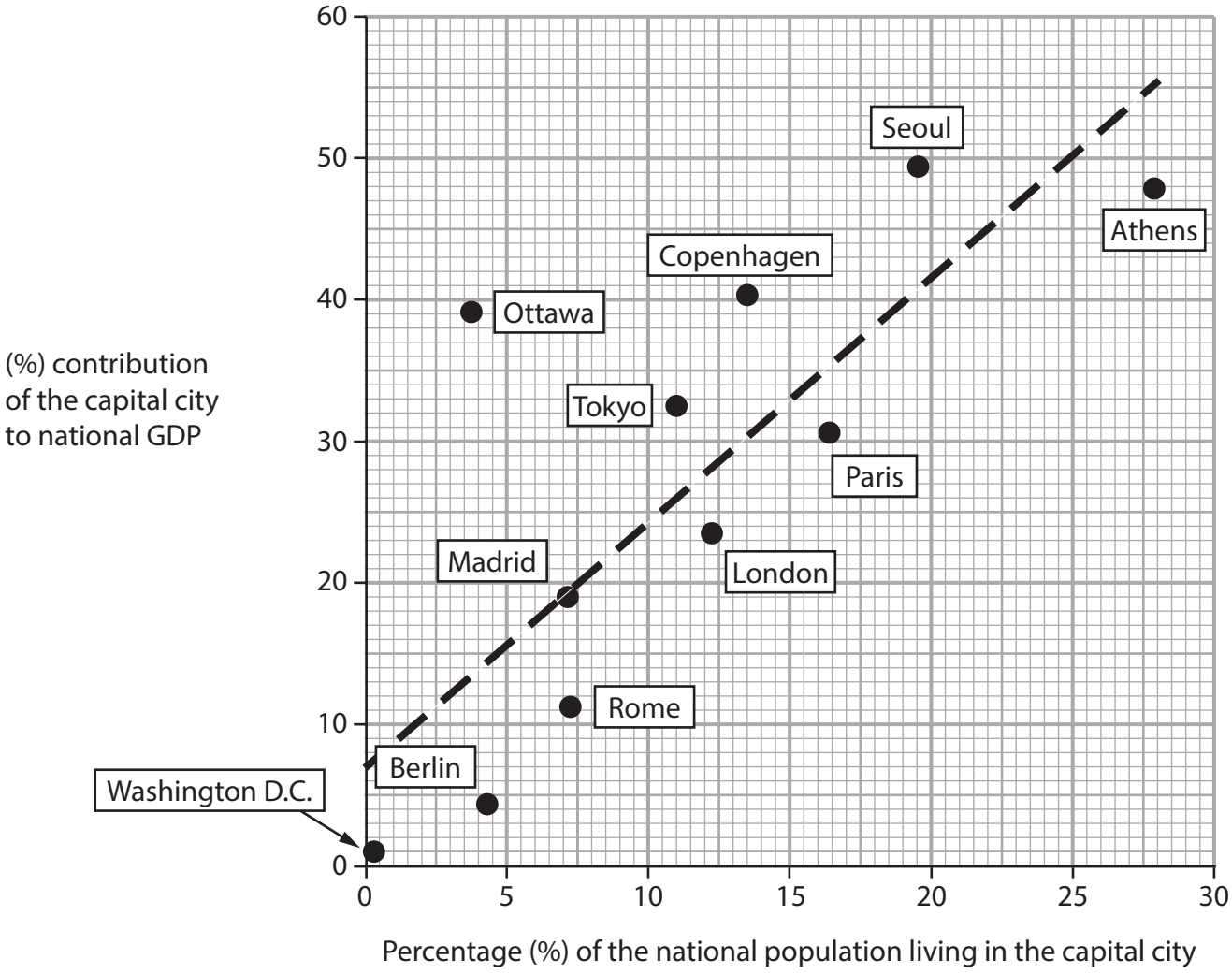


Figure 10

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(i) Identify the city which makes the largest % contribution to GDP.

(1)

- ☒ **A** Copenhagen
- ☒ **B** Seoul
- ☒ **C** Ottawa
- ☒ **D** Athens

(ii) Describe the relationship shown in Figure 10. Use numeric data in your answer.

(3)

(f) Identify which **one** of the following best describes urban primacy.

(1)

- ☒ **A** where the population of a city is growing rapidly
- ☒ **B** a city which has experienced deindustrialisation
- ☒ **C** a city with a very large economic and political influence
- ☒ **D** when the city has a very large tertiary sector

(g) Explain **one** difference between formal and informal employment.

(2)

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(h) Explain **two** advantages of bottom-up strategies in a named megacity in a developing or emerging country.

(4)

Named megacity: .....

1 .....

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(i) For a named megacity in a developing or emerging country, assess the reasons for past and present trends in population growth.

(8)

Named megacity: .....

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(Total for Question 3 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 64 MARKS

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Mark Scheme (Results)

Summer 2023

Pearson Edexcel GCSE
In Geography B (1GB0)
Paper 01: Global Geographical Issues

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Summer 2023
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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

<table>
<tr><th>Question number</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1a (i)</td><td>B. 60°N and 0°

All other answers are incorrect.
The equator has the highest rainfall totals. Here, rising water vapour produces high rainfall totals. At 60°N, rainfall totals are also high due to rising air water vapour at the junction of the Polar and Ferrel cells.</td><td>1</td></tr>
<tr><td>1a (ii)</td><td>Cell X is the Polar cell.
Cell Y is the Hadley cell.

Accept either the correct names of the cells (as below)

<table><tr><th>Location</th><th>Atmospheric cell</th></tr><tr><td>X</td><td>Polar</td></tr><tr><td>Y</td><td>Hadley</td></tr></table>
or

<table><tr><th>Location</th><th>Atmospheric cell</th></tr><tr><td>X</td><td>A</td></tr><tr><td>Y</td><td>E</td></tr></table>
All other answers are incorrect.</td><td>2</td></tr>
</table>

1b	Allow 1 mark for identifying a source of historical information which provides evidence for climate change and further marks for explanation. ● Records of sea levels (1) can show us evidence of ice melt / warmer oceans (1) and subsequent sea level rise (1). ● Ice cores (1) can be analysed to determine the amount of carbon dioxide in them (1). Higher concentrations of carbon dioxide are associated with warmer / inter-glacial periods (3). ● Tree rings can be analysed (1) with the width between them telling us about past climates (1). A larger distance between the rings indicates a hotter / wetter period / higher carbon dioxide levels (1). ● Historical records such as diaries / newspapers / paintings (1) detailing frost fairs on the River Thames / difficult farming periods (1) may inform us of warmer and cooler periods (1). ● Diaries / newspapers / journals (1) inform us about conditions at the time (1) enabling us to compare former conditions to current conditions 1) ● U-shaped valleys (1) show evidence of previous glaciation (1), indicating the climate in the UK was much colder than present (1). ● Pollen analysis (1) can inform us of ancient plant types no longer existing in an area (1) which are suited to growing in climates very different from those found today (1). ● Historic data on carbon dioxide concentrations can be studied (1). Higher concentrations are associated with inter-glacials / warmer periods (1), lower concentrations are associated with glacial / cooler periods (1). ● Historic temperature data (1) can be compared to current day temperatures (1) indicating warmer / cooler periods (1). ● Rock type / geology (1) provide evidence of sediment deposited by shallow seas (1) which has subsequently risen due to climate change (1). **Accept any other appropriate response.**	3

1c	Award 1 mark for correctly naming the type of volcano. Note that answers may relate to the shape of the volcano **or** the fact that the volcano is clearly active. For example… ● Composite. ● Stratovolcano. ● Active. ● Explosive. **Note: Do not accept steep or conical.** **Accept any other appropriate response.**	1
1d	A – Conservative plate boundaries is the correct answer as volcanoes do not occur at this boundary type. All other answers are incorrect. B – Hotspots is incorrect. Here, volcanoes typically have basaltic magma resulting in shield volcanoes such as Mauna Loa, Hawaii. C – Convergent boundaries is incorrect. Here, volcanoes typically have andesitic magma resulting in stratovolcanoes or composite volcanoes. D – Divergent plate boundaries is incorrect as volcanoes in these locations predominantly have basaltic magma producing shield volcanoes such as Eyjafjallajökull.	1

1e	Allow 1 mark for correctly identifying a reason why some earthquakes are destructive and further marks for explanation of that reason. ● Some earthquakes have a high magnitude (1) this results in lots of energy being released (1) which can cause huge amounts of damage to buildings / property (1). ● High magnitude earthquakes (1) can cause buildings to collapse (1) causing people to die (1). ● Some earthquakes impact countries with a low level of development / lack of financial resources (1). In such locations, a lack of building regulations (1) results in large amounts of building collapse (1). ● The level of preparation is important (1). Areas which have money to invest in aseismic buildings (1) can significantly reduce the amount of building collapse in the event of an earthquake (1). ● Earthquakes can produce avalanches / landslides (1) resulting in destruction of nearby settlements (1) causing people to die (1). ● Some earthquakes have a shallow focus (1) this means that the energy released has a short distance to travel (1) causing large amounts of damage on the surface (1). ● The distance from the epicentre can be important (1). Areas close to the epicentre may experience powerful seismic waves (1) resulting in buildings collapsing (1). ● Some earthquakes can have several aftershocks (1). This further weakens buildings which are already damaged (1) resulting in their collapse (1). ● Earthquakes under the sea can produce tsunamis (1), this is due to an upward thrust of the sea bed / causing the displacement of water (1) causing damage to coastal settlements (1). ● Some earthquakes can affect densely populated areas (1). Densely populated areas can be vulnerable to damage to collapsing buildings (1) and emergency services may be overwhelmed (1).	3

	● The time of day can be important (1). If an earthquake occurs at night, more people will be in their homes (1) and be vulnerable to building collapse (1). ● The weather / time of year can be important (1). If people become homeless (1) they may be exposed to frostbite / hypothermia (1). **Note: Do not credit lack of money or significant financial resources unless accompanied by an explanation as seen in example 3 above.** **Allow any other appropriate response.**	
1f (i)	B – Bangkok (10.45 million) All other answers are incorrect.	1
1 f (ii)	Award 1 mark for candidates calculating that 87% of 117 billion is 101.79 billion. (1) Award a further mark for deducting 101.79 billion from 117 billion = 15.21 billion. (1) **Also allow 15.2 or 15 as the correct answer.** There are several routes to the correct answer of 15.21 billion. 117 billion/100 = 1.17 billion. 1.17 x 87 = 101.79 billion (1) 117 billion – 101.79 billion = 15.21 billion (1) OR Award 2 marks to candidates who identify a reduction of 87% from the 2020 figure equates to 13% remaining. 117 billion x 0.13 (1) = 15.21 billion (1) 117 x (1-0.87) (1 mark) = 15.21 (1)	2

1 g	Award 1 mark for identifying a condition which is required for the formation of tropical cyclones and a further mark for explanation up to a maximum of 2 marks for each explanation. ● A warm ocean / ocean with a temperature over 26.5°/27°C (1) results in formation of a warm body of air / causes warm air to rise (1). ● Warm sea temperatures (1) provide the cyclone with energy (1). ● Strong winds in the upper atmosphere / troposphere (1) result in warm air to rising rapidly from the ocean (1). ● Tropical cyclones require a rotational force / the Coriolis force (1). This means they form away from the equator (1). ● Winds that do not vary greatly with height / a low wind shear (1) allows the storm clouds to rise to a great height (1). ● Converging winds near the ocean surface (1) forcing air to rise and form storm clouds (1). ● High levels of humidity in the lower atmosphere (1), can results in rapid convection (1). Accept any other appropriate response.	4

1h	Award 1 mark for identifying a reason why some countries have a high level of vulnerability and a further mark for explanation up to a maximum of 2 marks for each explanation. ● Some countries lack the finances to put adequate protective measures in place (1). ● In poorer countries (1) the population may be less prepared for a tropical cyclone (1). ● Poorer countries (1) are often more vulnerable as buildings may be poorly constructed (1). ● Poorer countries may suffer from a lack of emergency services (1). ● Some countries lack satellite technology (1) due to a lack of money (1). ● Some countries lack infrastructure (1) to alert their citizens to oncoming cyclones (1). ● Countries with access to satellite technology (1) can alert their population when a tropical cyclone is due to make landfall (1). ● Countries lacking financial resources (1) struggle to construct storm-surge defences (1). ● Low lying countries (1) are vulnerable to storm surges / coastal flooding (1). ● Countries which are isolated (1) may find it difficult to receive aid (1). ● Countries with large numbers of people living in coastal areas are vulnerable to the impact from storm surges / coastal flooding (1). ● An elderly / ageing population (1) may find it difficult to evacuate (1). ● The population may lack access to information relating to the cyclone (1) therefore may not evacuate in time (1). ● Some locations have removed natural defences such as mangroves (1) leaving themselves vulnerable to the coastal flooding / storm surges (1). **Note: Either two well-explained social reasons, two well-explained economic reasons or one social reason and one economic reason are all equally valid ways to achieve 4 marks.** **Additionally, reasons to do with the physical geography of countries (for example their low-lying nature) should be credited as they do create social/economic vulnerability.** **Accept any other appropriate response.**	4

1i	A02 4 marks / AO3 4 marks **AO2 4 marks** ● Human activities such as industry, transport, energy production and farming produce greenhouse gases such as carbon dioxide and methane that have enhanced the greenhouse effect leading to global warming. ● Greenhouse gases trap heat in the atmosphere, acting like a blanket and lead to increases in the temperature of the Earth. ● Greenhouse gases can be produced by both human activity and natural causes. Carbon dioxide, methane and nitrous oxide occur naturally in the atmosphere although human activity has significantly enhanced their concentration. Other greenhouse gases such as chlorofluorocarbons (CFCs) are only produced by human activity. ● In recent times, human activities have had a significant impact on climate change and the associated enhanced greenhouse effect. ● Variations in solar output can take place due to sunspot activity. ● Increased sunspot activity has been recorded in periods of increased temperatures with decreased sunspot activity being recorded in cooler periods of the Earth's history. ● Periods of increased volcanic activity have been associated with periods where there has been a reduction in global temperatures as a consequence of ash clouds reflecting solar energy. ● In the long-term, research has suggested that volcanic activity can have a warming effect due to the emission of carbon dioxide, contributing to the greenhouse effect. ● Milankovitch cycles have also been attributed to changes in the earth's climate. ● Changes in the Earth's orbit, the Earth's tilt and the Earth's wobble have resulted in variations in the amounts of solar energy reaching the Earth's surface. ● Large asteroid collisions cause dust particles to be transferred to the upper atmosphere, reducing the amount of solar radiation reaching the Earth's surface leading to a cooling effect. ● More recently, human activities have had a significant impact on climate change and the associated enhanced greenhouse effect. **AO3 (4 marks)** ● Judgement regarding the significance of various human activities and their impact on rapidly rising concentrations of greenhouse gases. ● Judgement regarding the significance of the various causes of natural climate change. ● Judgement regarding the longer-term historical significance of natural causes versus the more recent contribution of human activity to climate change. ● Judgement regarding the significance of natural causes of climate change versus more the more recent contribution of humans to climate change. ● Assessment of the view, with supporting and counterarguments.	8

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3)

2a (i)	D – Malaysia. All other answers are incorrect.	1

2a (ii)	Award 1 calculation mark for the mean calculation (addition of the five GDP per capita values and division by five) and a further mark for the correct answer given to one decimal place. 20,363 / 5 (1) = 4072.6 (1). 2608 + 1547 + 2270 + 3526 + 10,412 / 5 (1) = 4072.6 (1)	2
2a (iii)	Award 1 mark for the identification of a suitable data presentation technique and another mark for description of the technique. ● A bar chart (1) with countries along the x-axis and literacy rate % on the y-axis (1). ● A choropleth map(s) (1) with shading showing literacy rates for 2011 and 2020 (1). ● A line graph (1) with literacy rates on the y-axis and a line representing each country (1). ● A divided bar chart (1) with literacy rates on the y-axis and countries on the x-axis (1) Note: Candidates may draw an example of a data presentation technique rather than provide a written answer. If the technique is valid and both axis are labelled accurately then award two marks. **Accept any other appropriate response.**	2

2a(iv)	Award one mark for identification of a reason why literacy rates may be improving and a further mark for explanation of that reason. ● Improved access to education (1) results in a improved school attendance (1). ● More money will be spent on schools / training teachers (1) meaning more children can attend school (1). ● Improving women's rights (1) results in a greater proportion of girls attending school (1). ● In some areas, improved literacy has been a focus for charities (1) resulting in additional resources being invested in this area (1) ● Governments are investing more in education (1) building more schools (1). **Accept any other appropriate response.**	2
2b	Award one mark for identifying an advantage of development work led by Non-Governmental Organisations (NGO's) and further marks for explaining why this is advantageous. ● Local needs are met (1) directly improving the quality of life (1). ● NGO led development often involves consultation with local people (1) this helps to directly address locals needs (1) improving their living conditions (1). ● NGO development focuses on local needs (1) improving their living conditions (1). ● Development of this kind makes use of intermediate / appropriate technology (1) this can more easily be used by local people (1) and can be repaired if it breaks down (1). ● This approach is low-cost (1) and is more affordable to poorer communities (1) avoiding the need to take costly loans (1). ● These projects have less of an impact on the environment (1) as they are smaller in scale (1) and have require less construction / building materials (1). **Accept any other appropriate response.**	3
2c (i)	C – 38% All other answers are incorrect.	1

2c (ii)	Award one mark for correctly calculating the difference between the 2010 and 2020 service industry figures. 14% (1). There is no need to show working out, but it's calculated this way. 2010 service industry percentage is 34%. In 2020, it is 48%. 48% - 34% = 14% Note : Some candidates may calculate the difference as a percentage increase. Please accept such answers. For example….. 48-34 = 14. 14/34 x 100 = 41.18% (1) or rounded to one decimal place = 41.2% (1).	1
2d	Award 1 mark for identification of a reason why the percentage of people employed in agriculture decreases as a country develops and further marks for explanation of this reason. ● More people work in factories (1) as these jobs are often higher paid (1). ● Industrialisation occurs (1) resulting in more people moving into manufacturing jobs (1) ● As a result of increased mechanisation (1), less workers are needed in agriculture (1). ● There is a move from jobs in the primary to secondary / tertiary / quaternary sector (1) as these jobs are often higher paid (1). ● As the wealth of the population increases (1) there is more demand for financial services (1). ● Food is increasingly imported from overseas (1) meaning fewer farmers are required (1). ● Investment from TNC's (1) which offer higher paid salaries than those available in agriculture (1). ● Salaries in manufacturing / service industries may be higher than agriculture (1) resulting in people seeking employment in these sectors (1) ● Rural – urban migration occurs due to opportunities in urban areas (1) as a result of investment in creating alternative job opportunities (1). **Accept any other appropriate response.**	4

2e	Award 1 mark for identification of a reason why greenhouse gas emissions may change as a country undergoes economic development and award further marks for explanation of this reason. ● More money leads to the increased usage cars (1). This results in more petrol / fossil fuels being burnt (1) ● More money is available to invest in renewable technology (1). Meaning less fossil fuels are burnt (1). ● Countries may reduce the burning of fossil fuels (1) and adopt more renewable energy (1). ● Environmental laws/legislation (1) encouraging the use of cleaner technology (1). ● Increasing awareness of the health impacts of emissions (1) can encourage the public to put pressure on governments to reduce emissions (1). ● Environmental pressure groups (1) can influence the behaviour of governments to reduce emissions (1). ● More money is available to invest in manufacturing industries (1) leading to increasing consumption of fossil fuels (1). ● Countries with an absence of strong environmental laws (1) may become attractive destinations for polluting TNCs (1). ● Moving from an economy based mainly on agriculture to one based on manufacturing (1) will increase the burning of fossil fuels (1). ● Deindustrialisation (1) leads to fewer fossil fuels being burnt (1). Note: It is valid for candidates to argue that countries may reduce pollution as they move from a manufacturing to service-based economy or increase pollution as they move from an economy based mainly on agriculture to one with an increasing focus on manufacturing. Do not credit more money in isolation. This needs to be expanded with what the money is being used for as shown in examples 1 and 2. **Accept any other appropriate response.**	2

2f	Award 1 mark for identification of a way the international role of a named emerging country has changed and a further mark for explanation. ● China / India has become a hugely important trading partner for many countries (1) due to its skilled workforce / good infrastructure (1). ● China / India has attracted a large number of TNCs / FDI (1) who are attracted by its cheap labour / well-educated population (1). ● More trade as a consequence of globalisation (1) has established more links with other countries (1). ● India is taking a more important role in global efforts to reduce greenhouse gas emissions (1). It has done so by making commitments to global climate targets (1). ● India has increased its contribution of soldiers to UN peacekeeping missions (1) and is the largest contributor of any nation in the world (1). ● India now donates more aid than it receives (1) as a result of rapid improvements to its GDP (1). ● China has made significant investments in many African nations (1). This has resulted in infrastructure improvements (1). ● China / India is a leader in the space race (1) and has launched many satellites into space (1). ● An increasing number of companies from China/India have entered the Fortune 500 (1) as a consequence of their increasing profits (1). ● China and India are members of the G20 (1) a group of countries responsible for stabilising the global economy (1). ● Nigeria has become an important trading partner for China (1) who have invested billions in infrastructure developments in the country (1). ● Nigeria has increased its participation in UN peacekeeping missions (1) contributing large numbers of troops to improve security in other countries (1). **Accept any other appropriate response.**	4

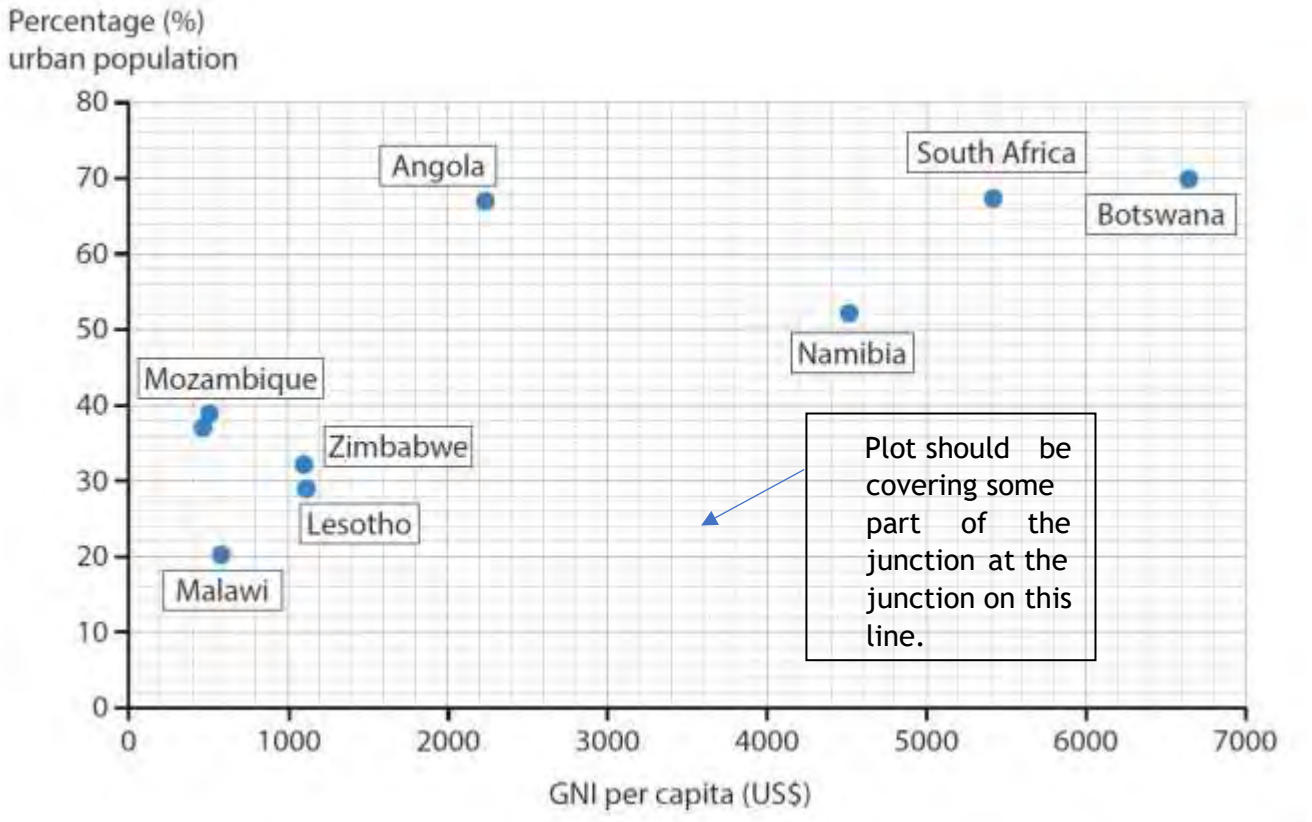
2g	**AO2 4 marks / AO3 4 marks** **A02 4 marks** ● India has a dominant position in the Indian Ocean which offers it close contact with the Middle East, Africa and Europe from its west coast whereas its east coast gives it trade opportunities with the Asian Tigers in South Eastern Asia. ● India acts as a transit point connecting sea routes from Europe with countries in South Eastern Asia. ● India has a huge coastline which facilitates trade with other nations. ● Other historical factors have been important in the development of India. Colonialisation exploited the Indian economy resulting in India becoming an exporter of cheap raw materials. ● Economic liberalisation in India in 1991 resulted in the rapid expansion of foreign direct investment. Whereas this policy has been credited with significantly reducing poverty, it has also been argued it has increased inequality and worsening rural living standards. ●The Himalayan Mountain range acts as a barrier to land-based trade between India and China. ● India has a tense relationship with neighbouring Pakistan with the two countries in conflict over Kashmir. ● In recent years, India has proven to be an attractive destination for investment from TNCs due to its educated workforce, relaxation of corporate taxes and increasingly developed infrastructure. ● The development of India has not been even with more favourably located coastal areas such as Mumbai becoming attractive destinations for TNCs whereas inland India has remained relatively undeveloped. ● Significant differences in development exist between regions of India. Bihar's landlocked location discourages foreign direct investment as there is no access to the coast to directly export goods. ● China's location with a huge eastern seaboard has enabled it to become a major exporter of products to the rest of the world and an attractive destination for TNCs. ● China's position, with a coastline on the Pacific Ocean is strategically important giving it access to the American markets. ● China's is in close proximity to rapidly growing markets in South Eastern Asia. ● Whereas China's eastern seaboard has developed rapidly in recent years, development has not been even with inland China's development lagging behind areas with a more favourable coastal location.	8

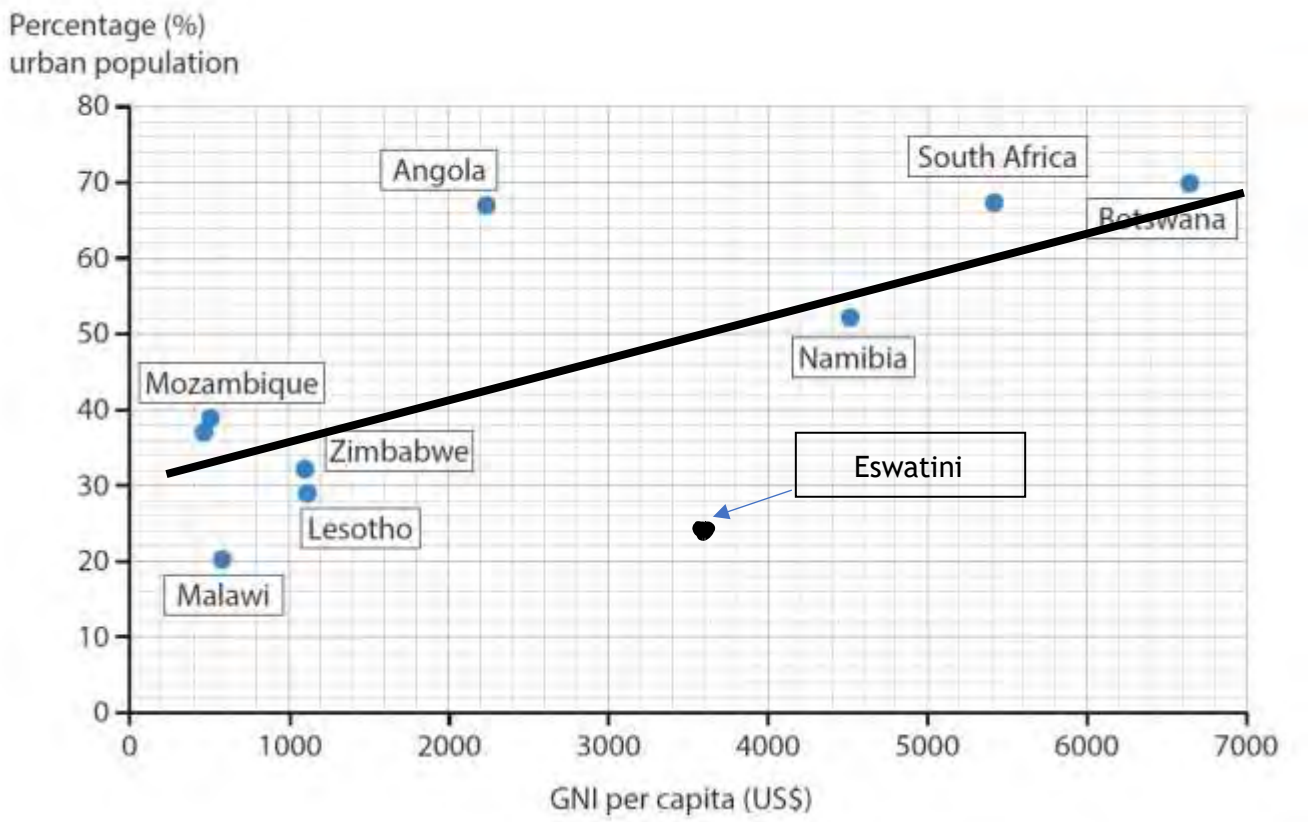
	AO3 4 marks ● Judgement regarding the overall importance of the emerging country's location in its development. ● Judgement regarding the overall importance of the emerging country's location, evaluating positive and negative aspects. ● Judgement regarding the importance of other factors influencing the development of the emerging country. ● Judgement regarding the relative importance of other factors influencing the development of the emerging country versus the importance of its location.	

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
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Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* ● Learners write nothing. ● Learners response does not relate to the question. ● Learners achievement in SPaG does not reach the threshold performance level, for example severe errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* ● Learners spell and punctuate with reasonable accuracy. ● Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. ● Learners use a limited range of specialist terms as appropriate.
SpaG 2	2-3	*Intermediate performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with general control of meaning overall. ● Learners use a good range of specialist terms as appropriate.
SpaG 3	4	*High performance* ● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with effective control of meaning overall. ● Learners use a wide range of specialist terms as appropriate.

3a (i)	B – The movement of people towards the edge of a city. All other answers are incorrect. A is the definition for rural to urban migration. C refers to movement between cities. D is the definition for re-urbanisation.	1
3a (ii)	Award one mark for identifying a reason why people are moving out of urban areas and a further mark for explanation of that reason. Typically, the reason identified will be a rural pull or urban push factor. ● Housing in rural areas is often cheaper (1) which causes people to leave expensive locations near the centre of the city (1). ● Housing in city centre / urban locations is often expensive (1) which causes people to move to cheaper locations in rural areas (1). ● Land prices are high in urban areas (1) therefore people cannot afford to live there (1). ● A better quality of life in rural areas (1) such as quieter with less traffic noise and/or less pollution (1). ● A lower quality of life in urban areas (1) due to traffic congestion / pollution (1). ● Increased car ownership (1) has resulted in people being able to live further from their place of work (1). ● The growth of working from home (1) has resulted in people being able to live further away from city centre locations where offices may be based (1). ● Locations in rural areas are generally safer (1) encouraging people to move away from urban areas / inner city areas which often have more crime (1). ● Rural areas have a quieter / more peaceful way of life (1) which is particularly appealing for retired people (1). ● New home construction in rural areas (1) has caused people to leave expensive urban locations (1). ● Higher rates of crime in urban areas (1) encourage people to move to rural areas which may be safer (1). ● As people retire (1) they no longer need to live close to their place of work (1). **Accept any other appropriate response.**	2

3b (i)	Award one mark for a plot on the line shown below.  	1

3b (ii)	Award one mark for a line drawn with between 5-7 plots either side (above or below) as shown in the example below.  **Note : Do not penalise if Eswatini plot is not labelled.** **Note : Do not penalise if best fit line is not extended to y-axis.**	1
3b (iii)	Award one mark for the calculation, identifying that the highest value is 70% and the lowest value is 20% (1). Award a further mark for the correct answer for the range of these values of 50% (1). For example: 70%-20% (1) = 50% (1). **Note : Allow for the answer not being written on the dotted line. It will frequently be shown as 70-20 = 50 in the space allowed for 'you must show your working'.**	2

3b (iv)	Award one mark for each correct statement relating to the relationship shown on the scattergraph. ● There is a positive relationship (1). ● As GNI per capita increases, the % of the urban population increases (1). ● Angola / Eswatini are anomalies (1). ● Eswatini has a lower % of the population urban than would be expected given its GNI per capita (1). ● Angola has a higher % of the population urban than would be expected given its GNI per capita (1). ● Botswana has the highest GNI per capita – over $US6600 (1). ● Botswana has the highest % of the population urban at 71% (1). ● Malawi has the lowest % of the population urban at 18% (1). **Note: max 2 if no use of data. Please note that the data might be country names rather than numerical data.** **Accept any other appropriate response.**	3
3c	Award one mark for identifying a factor influencing land use and a further mark for explanation of this point. ● Land in city centres / CBD is expensive (1). Therefore, only commercial businesses /shops/offices which can afford the high rents dominate in this area (1). ● Land is cheaper on edge of town locations (1). Therefore, residential land use dominates in these areas (1). ● Land is cheaper on edge of town locations (1). Therefore, out of town shopping centres are found in these areas (1). ● The expensive land use in city centre locations (1) results in taller buildings found here to minimise the cost of ground rent (1). ● The CBD is very accessible (1). This attracts retail which requires high footfall (1). ● Edge of town locations are accessible by ring roads / motorways (1). This attracts manufacturing industry which needs to move its goods to markets (1). ● Edge of town locations are accessible via main roads (1) which attract housing developments with residents valuing accessibility to workplaces (1). ● Inner city areas are often less accessible with congested road networks (1), these sites are unattractive to industries requiring rapid access to marketplaces (1). ● Planning regulations (1) often encourage the construction of new developments on brownfield locations (1). ● Deindustralisation (1) has led to the dereliction of buildings (1). ● Urban planning will control what can be built where (1) sometimes protecting open spaces such as parks (1). ● Government / local government policy (1) may seek to focus regeneration on brownfield sites (1). **Accept any other appropriate response.**	4

3d (i)	Award 1 mark for any of the following correct answers. ● 12.1:36.3 ● 1:3 ● 2:6 **Note : do not penalise candidates who do not use a colon to separate their numbers – allow 1/3 or 1.3.**	1

3d (ii)	Award 1 mark for each comparative comment up to a maximum of 3 marks. ● The number has increased / will increase (1) from 13 to 34 and /or more than doubled (1). ● The number of megacities in Asia is forecast to rise / has risen considerably (1). ● There are more megacities in the tropics in 2025 (1). ● In 2000, the countries with the most megacities (two) were Japan and the USA. By 2025, India is forecast to have the most megacities. (1) ● The number of megacities in Asia is forecast to rise considerably (1). ● In 2000 there is only 1 megacity in South America whereas in 2025 it is forecasted there will be 4. (1). ● There are forecast to be 3 more megacities in Africa by 2025 (1). ● North America is forecast to have the same number of megacities by 2025 (1). **Accept any other appropriate response.**	3
3diii	Award 1 mark for identifying a reason for the increasing numbers of megacities and a further mark for explanation. ● The number of megacities is rising rapidly in Asia due to rural-urban migration (1) due to job opportunities in urban areas (1). ● People are moving to megacities in Asia (1) due to job opportunities (1). ● A lack of access to healthcare facilities in rural areas (1) results in rural to urban migration (1). ● Natural increase (1) as a consequence of a high number of young people living in urban areas (1). ● Birth rates are higher than death rates in urban areas (1) due to a younger population living in urban areas (1). ● A perceived improved quality of life (1) is an urban pull factor to megacities in emerging countries (1). ● The number of megacities has risen due to urban job opportunities (1). This has led to increased rural to urban migration. Note: Please do not accept birth rates in isolation. There needs to be some reference to death rates too and the fact that birth rates exceed death rates (the concept of natural increase). Max 3 if no use of evidence/data from Figures 7a and 7b. This evidence can be numeric or written as shown in examples 1 and 2 above. Data needs to be in only one of the answers or can be both. Accept any other appropriate response.	

3e	**AO2 4 marks / AO3 4 marks** **AO2 4 marks** ● Sustainability involves meeting the needs of present generations without compromising the ability of future generations to meet their own needs. ● Sustainability can be viewed as making social, economic and environmental improvements in a community. ● Bottom-up development strategies are often led by Non-Governmental Organisations who involve local people in the project. ● Bottom-up development strategies are planned and controlled by local communities. ● In Mumbai, SPARC is an Indian NGO who works with local communities to build toilet blocks. ● Local communities help to build the toilet blocks and can then purchase low cost monthly permits to make use of them. ● In Mumbai, the Hamara Foundation provides education for street children so that they have a better quality of life. ● Bottom-up projects are low-cost; however, they can have less of a city-wide impact than top-down projects. ● In Lagos, the Makoko floating school has been constructed on stilts on the edge of Lagos Lagoon to provide an education for children from some of the poorest communities in the city. ● The school was built from sustainable materials making use of bamboo and timber, widely available in the local area. ● The school educates a relatively small number of children in the Lagos Lagoon area – around 100. ● The school was constructed in a marginal area and collapsed following a period of heavy rain in 2016. ● Top-down development strategies often involve decision making by governments or large communities. ● Top-down development involves external decision makers identifying a country's needs and implementing large scale, large cost projects with funding coming from IGO's (intergovernmental organisations organisations) such as the World Bank. ● Local people often have no say in the nature of top-down development projects or their implementation. ● Vision Mumbai is a top-down development project aimed at improving the quality of life in Mumbai. ● Whereas the project has re-homed thousands of former slum dwellers, many people are not happy as alternative housing is of poor quality and communities have been split up. ● Newly constructed apartments often have a high rent which former slum dwellers struggle to afford.	8
	AO3 4 marks ● Evaluative comments regarding the strengths and weaknesses of bottom-up strategies for example, whilst often being more sustainable often benefit a smaller number of people whereas top-down projects such have Vision Mumbai impact a larger proportion of the population. ● Evaluative comments regarding the social, economic and environmental successes of bottom-up strategies. ● Evaluation might suggest that urban infrastructure projects have to be top-down given their scale and the nature of networks.	

● Evaluative comments regarding the social, economic and environmental successes of bottom-up strategies.

● Judgement about which impact has been the greatest success of named top-down strategies.

● Judgement about which impact has been the greatest success of named bottom-up strategies.

● Judgement regarding the relative success of the top-down versus bottom strategies.

Level	Mark	Descriptor
	0	● No acceptable response
Level 1	1-3	● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2) ● Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4-6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7-8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Monday 22 May 2023

Afternoon (Time: 1 hour 30 minutes)

Paper reference **1GB0/01**

Geography B

PAPER 1: Global Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly** identified at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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P 7 2 5 6 9 A 0 1 2 8

Pearson

SECTION A

Hazardous Earth

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Study Figure 1 which shows atmospheric circulation cells in the Northern Hemisphere.

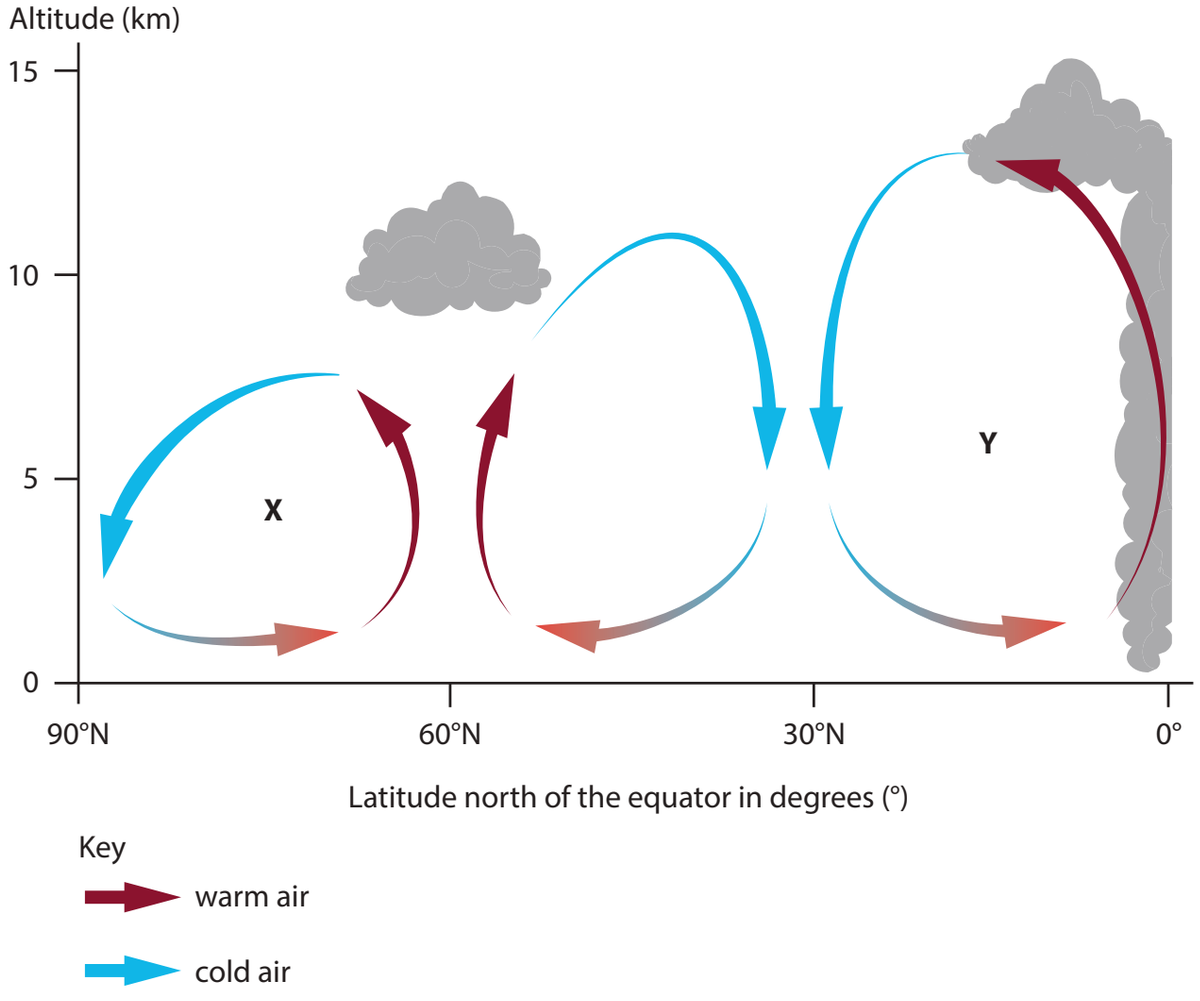


Figure 1

(i) Identify the lines of latitude with high annual rainfall.

(1)

☒ **A** 90°N and 60°N

☒ **B** 60°N and 0°

☒ **C** 90°N and 0°

☒ **D** 60°N and 30°N

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(ii) Identify the atmospheric cells found at locations X and Y by completing the table using the list below.

(2)

A Polar cell

B Ferrel cell

C Temperate cell

D Mid-latitude cell

E Hadley Cell

Location	Atmospheric cell
X	
Y	

(b) Explain **one** way in which historical sources show evidence for climate change.

(3)

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Study Figure 2.



Figure 2

(c) Name the type of volcano shown in Figure 2.

(1)

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(d) Identify **one** tectonic location where volcanoes are never found.

(1)

- ☒ **A** Conservative boundaries
- ☒ **B** Hotspots
- ☒ **C** Convergent boundaries
- ☒ **D** Divergent boundaries

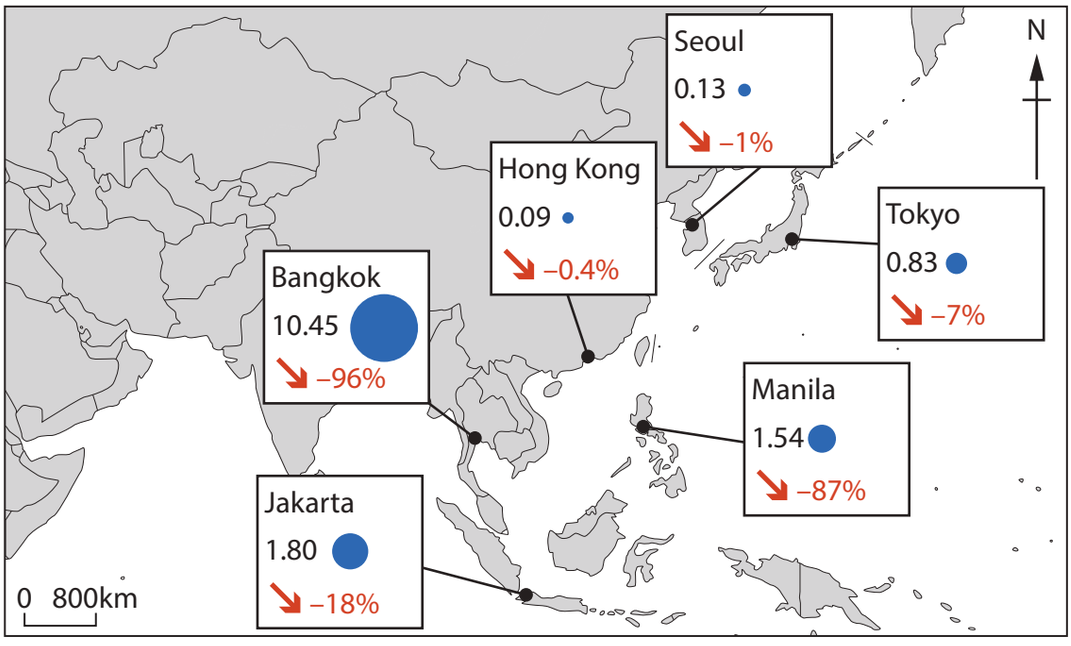
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(e) Explain **one** reason why earthquakes can be very destructive.

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(f) Study Figure 3 which shows the estimated risk to Asian cities by rising sea levels and flooding by 2030.



Key

Number of people at risk by 2030 (in millions)
(Size of circle proportional to the number of people at risk)

Estimated decline of city's Gross Domestic Product (GDP), 2020–2030

Figure 3

(i) Identify the city with the greatest estimated number of people at risk in 2030.

(1)

- ☒ **A** Manila
- ☒ **B** Bangkok
- ☒ **C** Jakarta
- ☒ **D** Tokyo

(ii) In 2020, the GDP of Manila was 117 billion US$ (US Dollars).

Calculate the estimated GDP of Manila in 2030.

You must show your working.

(2)

..... billion US$

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(g) Explain **two** reasons why tropical cyclones form between latitudes 5° and 30° north and south of the equator.

(4)

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(h) Explain **two** reasons why some countries are more socially and economically vulnerable to the impacts of tropical cyclones.

(4)

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(i) Assess the view that human activities causing climate change have become more important than the natural causes of climate change.

(8)

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(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

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SECTION B

Development Dynamics

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and use of specialist terminology will be assessed in 2(g).

2 (a) Study Figure 4.

Country	GDP per capita (US$) **2020**	Infant mortality rate (per 1000) **2020**	Life expectancy (years) **2020**	Literacy rate (%) **2011**	Literacy rate (%) **2020**
Lao People's Democratic Republic	2,608	36.4	68.2	58.2	84.7
Cambodia	1,547	21.1	69.8	77.8	84.4
Bangladesh	2,270	23.7	73.0	58.7	73.9
Viet Nam	3,526	16.2	75.6	93.5	95.4
Malaysia	10,412	5.6	76.4	93.6	94.9

Figure 4

Indicators of development for five countries in Asia

(i) Identify the country with the lowest infant mortality rate.

(1)

☒ **A** Lao People's Democratic Republic

☒ **B** Cambodia

☒ **C** Viet Nam

☒ **D** Malaysia

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(ii) Calculate the mean GDP per capita (US$) for the countries in Figure 4.

Give your answer to one decimal place.

You must show your working.

(2)

..... US$

(iii) The data shown in Figure 4 is presented in a table.

Describe **one** other suitable method of data presentation to show the literacy rates in 2011 and 2020.

You may use a diagram to help your answer.

(2)

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(iv) Explain **one** reason why literacy rates have improved in many developing countries.

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(b) Explain **one** advantage of development led by non-governmental organisations (NGOs).

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(c) Study Figure 5 which shows changes in the percentage (%) of people employed in different economic sectors in China between 2010–2020.

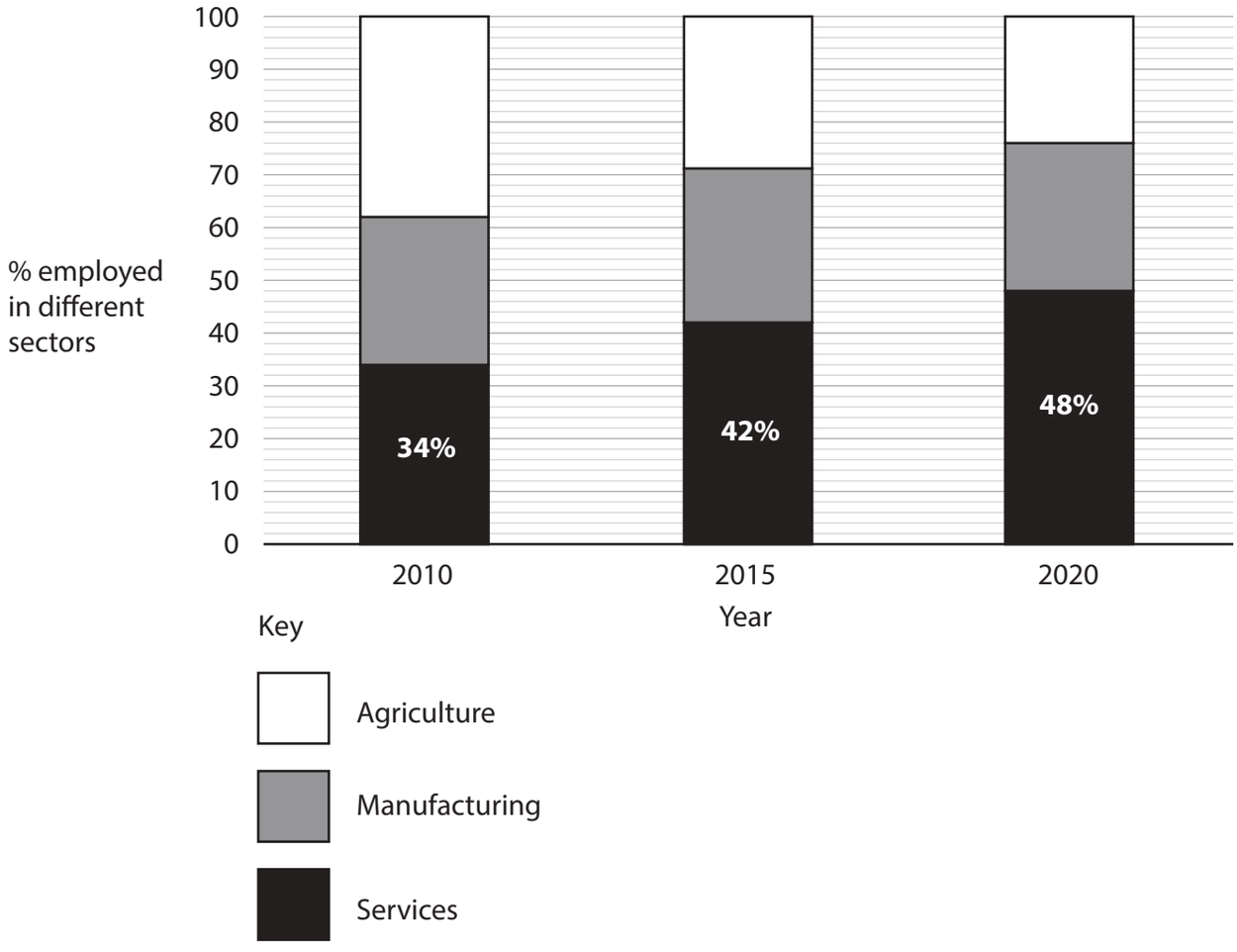


Figure 5

(i) Identify the percentage employed in agriculture in 2010.

(1)

- ☒ **A** 58%
- ☒ **B** 48%
- ☒ **C** 38%
- ☒ **D** 28%

(ii) Calculate the increase in the percentage of people employed in service industries between 2010 and 2020.

(1)

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(d) Explain **two** reasons why the percentage employed in agriculture often decreases as a country develops.

(4)

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(e) Explain **one** way economic development changes the greenhouse gas emissions of a country.

(2)

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(f) For a named emerging country, explain **two** ways its international role has changed.

(4)

Named emerging country

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(g) You have studied the reasons for the development of an emerging country.

Evaluate the importance of location in the development of a named emerging country.

(8)

Named emerging country

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(Total for spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 2 = 34 marks)

TOTAL FOR SECTION B = 34 MARKS

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SECTION C

Challenges of an Urbanising world

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 (a) (i) Identify which of the following is the best definition of suburbanisation.

(1)

- ☒ **A** The movement of people from rural to urban areas
- ☒ **B** The movement of people towards the edge of a city
- ☒ **C** The movement of people from one city to another
- ☒ **D** The movement of people towards inner city areas

(ii) Explain **one** cause of counter-urbanisation.

(2)

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(b) Study Figure 6 which shows Gross National Income (GNI) per capita (US$) and the % urban population for selected countries in southern Africa.

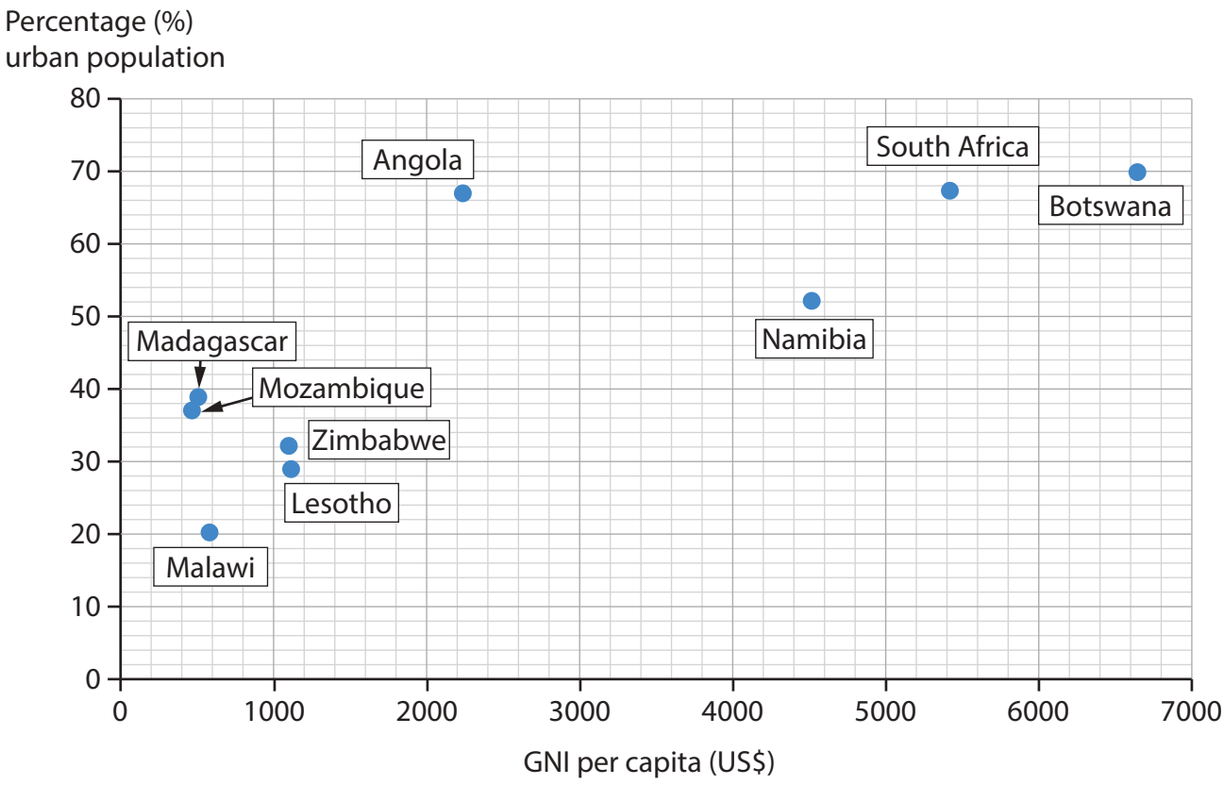


Figure 6

(i) Plot the data shown below to complete Figure 6.

(1)

Country	GNI per capita (US$)	Percentage (%) urban population
Eswatini	3,600	24

(ii) Draw a line of best fit on Figure 6.

(1)

(iii) Using Figure 6, calculate the range of % urban population.

You must show your working.

(2)

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(iv) Describe the relationship shown on Figure 6.

Use data in your answer.

(3)

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(c) Explain **two** factors that influence urban land use.

(4)

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(d) Study Figure 7a and Figure 7b showing the distribution of the world's megacities in 2000 (Figure 7a) and 2025 (Figure 7b).

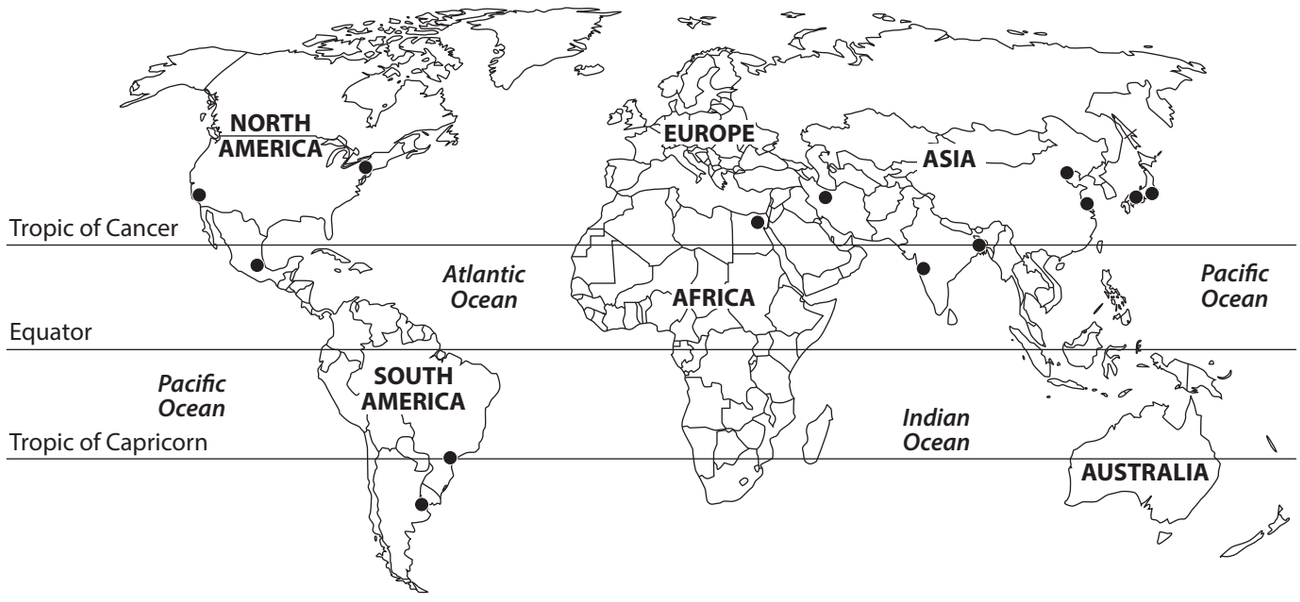


Figure 7a

Megacities in 2000

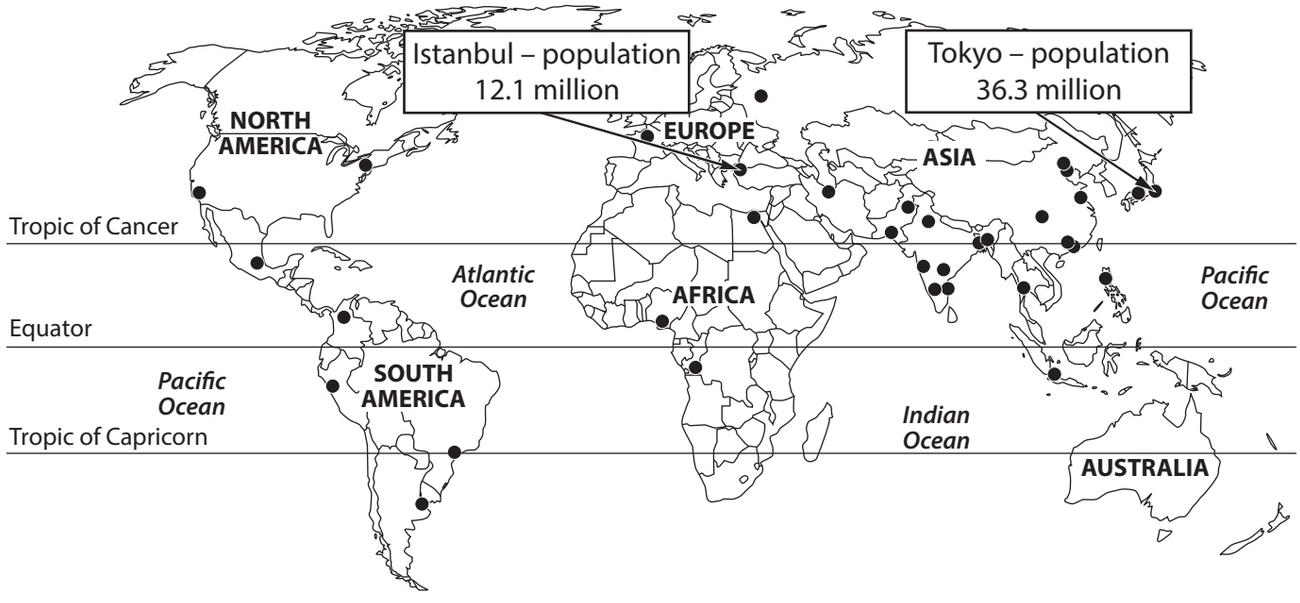


Figure 7b

Projected megacities in 2025

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(i) For 2025, calculate the ratio of the population of Istanbul to that of Tokyo.

(1)

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(ii) Using Figures 7a and 7b, compare the distribution of megacities in 2000 and 2025.

(3)

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(iii) Explain **two** reasons for the increasing number of megacities.

You must use evidence from Figures 7a and 7b.

(4)

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(e) You have studied top-down and bottom-up strategies in a named megacity in **either** an emerging **or** developing country.

Evaluate how successful different strategies have been in achieving sustainability.

(8)

Named megacity

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(Total for Question 3 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all the following sources used in the preparation of this paper:

Figure 3 https://www.statista.com/chart/25152/risk-of-rising-sea-levels-flooding-in-asia/

Mark Scheme (Results)

Summer 2018

Pearson Edexcel GCSE

In Geography B (1GB0/02)

Paper 02: UK Geographical Issues

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Summer 2018
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- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Answer	Marks
1(a)	C – chalk (clearly chalk from the whiteness of the White Horse) All three alternatives are rocks that do NOT have white variants	(1)

Question	Answer	Marks
1(b)	A – granite (the only igneous rock of the four options) All three alternatives are not igneous, schist is metamorphic whilst chalk and clay are sedimentary rocks.	(1)

Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate climatic difference and a second mark for making the correct explanatory link to altitude. Uplands are wetter than lowlands (1) due to relief rainfall and/or mountains force air to rise and thus cool and create clouds/rainfall (1) Temperatures decline with altitude so colder in the uplands (1) because as air rises it expands and so it cools (1) Rainfall increases with altitude because as air rises it cools (1) which leads to condensation and/or cloud formation and increased rainfall (1) There is more snow in the uplands (1) because of lower temperatures meaning precipitation sometimes falls as snow and not rain (1) Accept any other appropriate response	(2)

Question	Answer	Marks
2 (a) (i)	Longshore Drift Accept: Long Shore Drift	(1)

Question	Answer	Marks
2 (a) (ii)	C – south to north (The accumulation of sand on the southern side of the groynes is evidence of a south north movement) There is lack of evidence for any of the three alternatives	(1)

Question	Answer	Marks
2(a)(iii)	The sand/sediment is accumulating on the southern side of the groynes (1) suggesting that as it arrives on the beach it is moving northwards (1) Some of the waves are arriving from the south east (1) which will create swash at that angle and with backwash perpendicular sediment will move northwards (1) However, do not double penalise – there is a legitimate case to be made that some sand moves along the groyne west to east (not acceptable for the MCQ because not 'most likely' The sand accumulates against the groyne (1) and is shifted eastwards by wave action (1) Accept any other appropriate response	(2)

Question	Answer	Marks
2(b)	Award one mark for identifying any appropriate reason and up to three further marks for applying that to the increasing risk: Climate change (1) is causing sea-level rise (1) and increased storminess/more storm surges (1) which will increase rates of erosion on coastlines because of higher seas and/or more energetic wave attack (1) Economic decline (1) so government cutbacks on spending (1) so less money available for sea-defences (1) so areas less well protected (1) Allow answers that explain climate change as follows: Climate change (1) caused by increasing levels of greenhouse gases (1) with human enhanced emissions (1) leads to sea-level rise (1) Accept any other appropriate response	(4)

Question	Answer	Marks
3 (a)	C - Peak discharge was over 20 times higher than discharge on Day 1 (the explanation is contained in the response) A, B and D are self-evidently untrue by reference to the graph	(1)

Question	Answers	Marks
3 (b)	Award one mark for identifying correct reason and a second for extending that idea to apply it to erosional processes. One element of increased discharge is increased velocity and/or energy (1) so either/both hydraulic action and/or abrasion are more effective (1) Increased discharge increases load (1) which in turn increases abrasion (1) Accept any other appropriate response	(2)

Question	Answer	Marks
3(c)	Award one mark for each reason, and a further one mark for a development of how this impacts on storm hydrographs to a maximum of two marks each. More urbanisation (1) increases rates of run-off (or equivalent idea e.g. reduces infiltration) and/or more water in the river/ higher discharge (1) Changing agricultural practices/ land use (1) such as ploughing land previously left in grass which will increase runoff (1) Deforestation/Afforestation (1) affects interception and infiltration rates so changing run-off and thus lag-times (1) Climate change my increase/decrease storminess (1) which will affect lag-times because of changes in infiltration/run off relationships (1) Human management of rivers e.g. levees (1) maintains more water in the channel (1) Do not credit opposite as in afforestation/ deforestation. Accept any other appropriate response	(4)

Question	Indicative content
4	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • The reason for varied rainfall patterns is largely determined by the influence of altitude. • Higher areas are not just wetter but also colder. • The significance of this is historic in that these areas had a lower carrying capacity because of limitations on the Thermal Growing Season. • Soils are also poorer because rates of high rainfall and, in winter especially faster rates of weathering and mass transport which limit their development. • In more challenging areas crops cannot be grown and so pastoral/grazing land-use is an adaptation to those limitations. • Strong relationship despite technology diminishing impact of physical factors so 'lag effect'. • Other factors will have an influence – not least altitude and glaciated landscapes with poor soils. AO4 (4 marks) • Scotland's land-use is dominantly farmland. • Much of Scotland is made up of poor quality farmland – appears to be over 50%. • Intermediate quality farmland takes up another 40%. • Very little high-quality farmland. • There is a very close relationship between rainfall and land-use. • Almost all areas with precipitation > 1500 mm are 'poor quality farmland. • But not quite all – areas of north-east Scotland, Shetland (islands) and Outer Hebrides have poor farmland but relatively modest rainfall. • High quality farmland is exclusively in the east which has much lower rainfalls – in some places <600mm. • Settlements appear to be almost exclusively in low rainfall areas and close to high quality farmland areas.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)(i)	C – Just over 10 million (add together last two categories = 10.09) All other answers are self-evidently wrong.	(1)

Question number	Answer	Marks
5(a)(ii)	Allow one mark for correct answer 44.1 - and second mark for correct method. 14.49 + 8.47 =22.96/52.07 x100 (1) = 44.1 % (1)	(2)

Question number	Answer	Marks
5(a) (iii)	Allow one mark for each reason. It is cheaper for employers to employ women e.g. zero-hours contracts (1) Gender equality movements have made it easier for women to get jobs (1) The population has grown (1) Women are having fewer children so more available for work (1) The growth of the tertiary sector e.g. retail, health care, child care which traditionally are dominated by women (1) Availability/affordability of child minders improved therefore liberating women for work (1) More female students now, many of whom seek part-time work (1) Accept any other appropriate response	(2)

Question number	Answer	Marks
5 (b)	Award one mark for basic reason, either positive or negative, and a second through an extension which might be an application of that idea or an example of a particular industry/location/company. Reduction in job opportunities (1) because of off-shoring by companies (1) who are seeking lower costs e.g. labour (1) Increase in some sectors e.g. vehicle manufacturing (1) as TNCs move production into the UK e.g. Honda/Nissan (1) Increase in high-end manufacturing (1) as low-end jobs move offshore (1) Accept any other appropriate response	(2)

Question number	Answer	Marks
6 (a)(i)	C = Kingston upon Thames (score = 64-72) Other three are Lambeth 51-53, Enfield 54-56, Islington 48-50	(1)

Question number	Answer	Marks
6(a)(ii)	Allow one mark for any reasonable expression of the following idea. Where child poverty is higher GCSE scores are lower (1)	(1)

Question number	Answer	Marks
6 (a)(iii)	Award one mark for identifying a basic reason for variation and a further mark for expansion/application of that idea that clarifies relationship. Some parts of the city badly affected by deindustrialisation (1) so fewer jobs thus low household income (1) Some areas have a lack of available jobs (1) so high unemployment thus low household income (1) Some parts of the city dominated by social/council/municipal housing (1) which is relatively cheaper thus more households in poverty (1) Some parts of the city have large migrant communities (1) who have obstacles in accessing higher paid jobs e.g. poor language skills thus more households in poverty (1) All of these have possible opposites as in Some parts dominated by high cost housing (1) which suggests high income households so low poverty rates (1) Accept any other appropriate response	(2)

Question number	Answer	Marks
6 (b)	Award one mark for identifying the basic cause of a functional change (allow globalisation as a basic cause) and a further mark for expansion/application of that cause to inner city areas. Specific detail will depend on chosen UK city but expect.. Growth of finance and business services (1) as globalisation has promoted growth of service sector TNCs (e.g. banks) and/or governments have promoted and encouraged inward investment (1) Growth of education/universities (1) as governments have encouraged tertiary education (1) Deindustrialisation as secondary sector has moved/closed (1) because of globalisation and/or changes in infrastructure e.g. containerisation (1) Growth of sports/recreation (1) with government investment aimed at regeneration (1) Building of new residential areas (1) because of growing demand for labour in central city (1) Growth of diverse religious and cultural places (1) as a result of immigration (1) Accept any other appropriate response	(4)

Question number	Answer	Marks
6(c)	Award one mark for outlining/explaining a basic cause of change in surrounding accessible rural areas and a further mark or marks for expansion/application of that change to illustrate how exactly it changes. Specific detail will depend on chosen UK city but expect.. Urban sprawl into surrounding rural areas (1) has had an economic impact through creation of new jobs/type of employment (1) example or further development of same (1) Demand for housing has increased (1) has had impact on house prices (1) pricing out locals (1) example or further development of same (1) Impact on rural services (1) with changing pattern of demand (1) reflecting changing social/economic status of incomers (1) example or further development of same (1)	(4)

	Communities have experienced in-migration of commuters (1) who have different social background/attitudes (1) impacting on local institutions (1) example or further development of same (1) Accept any other appropriate response	

Question	Indicative content
7	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • Likely to be driven by employment opportunities so growing areas more likely to attract immigrants e.g. London and south-east, but especially London • 'Older' commonwealth migrants significant in northern/midland cities as a result of post-war employment opportunities and active overseas recruitment post-Windrush • Urban areas generally have wider range of jobs so more attractive thus urban centres have most of the migrants • EU migrants attracted by London jobs especially in finance and business services • Jobs in rural areas likely to be seasonal jobs in agriculture • Consequences likely to be real and perceived shortages of services – strain in education, housing and health • However migrants fill important gaps in labour market; especially in Health Service • May have social consequences of increases in racial tensions AO4 (4 marks) • The basic pattern is very uneven • London dominates the >15.1% areas • Only 7 areas have less than 2.5% (all) foreign born- 122 have more than 10% - over a third of the total • However, the <5% is nearly 100 areas but many of these are large so map is a little deceptive • Half of England and Wales areas have less than 2.5% EU migrants – • Concentrations of migrants in south coast cities and Oxford/Cambridge • Western areas have relatively few foreign born including Southwest, Wales and Cumbria

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Award one mark for focus on at least one element of the table (1) with suggested relationship to another both clear and legitimate (1) Is there a relationship between rock type (1) and the range of gradients found at both locations (1) The coarser the beach material (1) the steeper the gradient (1) Is there a significant difference between the gradients (1) at the two locations (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (a) (ii)	Award one mark for identifying a legitimate reason for location selection and a further mark for applying it to this context Location driven by need to select different rock types (1) that would offer a viable contrast (1) Locations needed to be accessible (1) for safety reasons (1) Locations needed to be close to school/centre (1) to allow time for data collection (1) Do not allow comments about factors which might impact on the timing of the trip rather than its location e.g. weather conditions Allow any other appropriate response	(4)

Question number	Answer	Marks
8 (a) (iii)	Award marks for any legitimate point which accurately describes any aspect of the data collection. In general, the Boulder Clay beach has steeper gradients (1) range 5^{o} to 7^{o} (1) whereas Sandstone beach has 3^{o} to 5^{o} range (1) Range of values on Boulder Clay beach makes mean much less useful as guide (1) 15^{o} to 2^{o} as opposed to max range of 8^{o} to 2^{o} on Sandstone beach (1) Minimum gradient measures very similar (1) range 2^{o} to 4^{o} (1)	(4)

	Limit to 3 marks if only one location is described Allow any other appropriate response	

Question Number		Indicative content
8 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Reference should be made to the results of data collection in terms of specific locations and the relationship with management of coastal communities. • Conclusions reached should be clear with references, not only to the secondary data but also primary data could be considered and how it supports the interpretation of secondary data. Does it reinforce or conflict? • Assessment should include how easy it was to access and use the secondary data, e.g. the correspondence between primary data collection at specific sites whereas much of the secondary data is areal. • Reliability might be considered in terms of the age of the secondary data. • Assessment address the correspondence between secondary data sources and the results of primary data collection • Importance likely to be critical given focus coastal management AO4 • Might include coastal management plans mostly derived from ICZM plans downloaded from the internet. • Might include maps, present and past to show changes in the coastal environment. • Might include meteorological data to examine trends in storm events. • Might include local plans including local land-use zoning which suggest priorities for coastal protection. • Might include local and national news sources covering historic events which impact on current policies. • Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a)(i)	Award one mark for focus on at least one element of the table (1) with suggested relationship to another both clear and legitimate (1) Is there a relationship between rock type (1) and the range of gradients found at both locations (1) The coarser the bedload (1) the steeper the gradient (1) Is there a significant difference between the gradients (1) at the two sites (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (a) (ii)	Award one mark for identifying a legitimate reason for location selection and a further mark for applying it to this context Location driven by need to select different rock types (1) that would offer a viable contrast (1) Locations needed to be accessible (1) for safety reasons (1) Locations needed to be close to school/centre (1) to allow time for data collection (1) Do not allow comments about factors which might impact on the timing of the trip rather than its location e.g. weather conditions Allow any other appropriate response	(4)

Question number	Answer	Marks
9 (a) (iii)	Award marks for any legitimate point which accurately describes any aspect of the data collection. In general, the Sandstone river has steeper gradients (1) range 12^{o} to 7^{o} (1) whereas Boulder Clay river has 7^{o} to 3^{0} range (1) Range of values on Sandstone river > Boulder Clay (1) 12^{o} to 4^{o} as opposed to range of 7^{o} to 3^{o} on Boulder Clay (1) More consistent decline ingredient on BC than Sandstone(1) data to support (1)	(4)

	Limit to 3 marks is a simple list of descriptive that pays no attention to the comparative aspects of the data collection processes Allow any other appropriate response	

Question Number		Indicative content
9 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Reference should be made to the results of data collection in terms of specific locations and the relationship flood risk for people and property • Conclusions reached should be clear with references, not only to the secondary data but also primary data could be considered and how it supports the interpretation of secondary data. Does it reinforce or conflict? • Assessment should include how easy it was to access and use the secondary data, e.g. the (lack of) correspondence between primary data collection at specific sites whereas much of the secondary data is areal. • Reliability might be considered in terms of the age of the secondary data. • Assessment address the correspondence between secondary data sources and the results of primary data collection • Importance likely to be critical given focus on flood management AO4 • Might include Environment Agency flood risk maps. • Might include past maps to show changes in the local environment especially building on the flood plain • Might include meteorological data to examine trends in storm events. • Might include local plans including local land-use zoning which suggest priorities for flood protection. • Might include local and national news sources covering historic events which impact on current policies. • Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making.
Level	Mark	Descriptor
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Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
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Question number	Answer	Marks
10 (a)	Award one mark for identifying a legitimate reason and a further mark for developing that idea. It was close to our school/centre (1) so we could spend enough time there (1) Area is varied so that we could get a range of results (1) allowing proper contrasts (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
10 (b)	Award one mark each for following; Sketch map gives clear indication of location e.g. local street names, specific and local places of interest (1) Sketch map has at least one of key/scale/north point (1) Annotations (either on diagram or in text) explain two criterion for selection which may include; distance apart on a transect (1) trying to select particular locations to show contrasts (1) health and safety considerations (1) attempt to stratify data selection (1) Allow any other appropriate response	(4)

Question number	Answer	Marks
10 (c)	Award one mark for basic point and further mark(s) for the development of that point. Because the sites selected for data collection were unrepresentative (1) so do not reflect the range of variation in chosen location (1) example/reasons for same (1) Because the sample size was not large enough (1) and so results may not be an accurate reflection of 'population' (1) example/reasons for same (1) Because of the range/limited number of sites/wrong day/timings (1) example/reasons for same (1) Because the sampling procedures were unrepresentative (1) and so don't reflect the overall population (1) example/reasons for same (1) Because not all the results were accurate (1) because of data gathering issues (1) example/reasons for same (1) Allow any other appropriate response	(4)

Question Number	Indicative content
10 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Economic and environmental data have improved but social data much more mixed • The evidence is partial based of 40 questionnaires from an unknown total population. • 40 'sampled' are very unlikely to be the same people. • 'Randomly selected residents' may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations. • The problems offered may not have included all of the problems that residents would have recorded if they were allowed a free choice. • This is a perception study and, as such, may not accurately reflect the reality of either of these environments. • Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study. AO4 • The results are not totally transparent. • Some measures (housing and jobs) have both improved. • So too litter and pollution • Other data is more mixed – transport better and slight improvement in local services. • Elderly people's situation apparently uncharged but young people's support is perceived as worse as is crime. • So general conclusion would be that the situation has improved on the weight of positive/negative view(s) • Reinforced by the fact that the top 6 categories have all either improved or remained unchanged.

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Question number	Answer	Marks
11 (a)	Award one mark for identifying a legitimate reason and a further mark for developing that idea. It was close to our school/centre (1) so we could spend enough time there (1) Area is varied so that we could get a range of results (1) allowing proper contrasts (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
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Question number	Answer	Marks
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Question Number	Indicative content
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Mark Scheme (Results)

Summer 2018

Pearson Edexcel GCSE

In Geography B (1GB0/02)

Paper 02: UK Geographical Issues

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- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Answer	Marks
1(a)	C – chalk (clearly chalk from the whiteness of the White Horse) All three alternatives are rocks that do NOT have white variants	(1)

Question	Answer	Marks
1(b)	A – granite (the only igneous rock of the four options) All three alternatives are not igneous, schist is metamorphic whilst chalk and clay are sedimentary rocks.	(1)

Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate climatic difference and a second mark for making the correct explanatory link to altitude. Uplands are wetter than lowlands (1) due to relief rainfall and/or mountains force air to rise and thus cool and create clouds/rainfall (1) Temperatures decline with altitude so colder in the uplands (1) because as air rises it expands and so it cools (1) Rainfall increases with altitude because as air rises it cools (1) which leads to condensation and/or cloud formation and increased rainfall (1) There is more snow in the uplands (1) because of lower temperatures meaning precipitation sometimes falls as snow and not rain (1) Accept any other appropriate response	(2)

Question	Answer	Marks
2 (a) (i)	Longshore Drift Accept: Long Shore Drift	(1)

Question	Answer	Marks
2 (a) (ii)	C – south to north (The accumulation of sand on the southern side of the groynes is evidence of a south north movement) There is lack of evidence for any of the three alternatives	(1)

Question	Answer	Marks
2(a)(iii)	The sand/sediment is accumulating on the southern side of the groynes (1) suggesting that as it arrives on the beach it is moving northwards (1) Some of the waves are arriving from the south east (1) which will create swash at that angle and with backwash perpendicular sediment will move northwards (1) However, do not double penalise – there is a legitimate case to be made that some sand moves along the groyne west to east (not acceptable for the MCQ because not 'most likely' The sand accumulates against the groyne (1) and is shifted eastwards by wave action (1) Accept any other appropriate response	(2)

Question	Answer	Marks
2(b)	Award one mark for identifying any appropriate reason and up to three further marks for applying that to the increasing risk: Climate change (1) is causing sea-level rise (1) and increased storminess/more storm surges (1) which will increase rates of erosion on coastlines because of higher seas and/or more energetic wave attack (1) Economic decline (1) so government cutbacks on spending (1) so less money available for sea-defences (1) so areas less well protected (1) Allow answers that explain climate change as follows: Climate change (1) caused by increasing levels of greenhouse gases (1) with human enhanced emissions (1) leads to sea-level rise (1) Accept any other appropriate response	(4)

Question	Answer	Marks
3 (a)	C - Peak discharge was over 20 times higher than discharge on Day 1 (the explanation is contained in the response) A, B and D are self-evidently untrue by reference to the graph	(1)

Question	Answers	Marks
3 (b)	Award one mark for identifying correct reason and a second for extending that idea to apply it to erosional processes. One element of increased discharge is increased velocity and/or energy (1) so either/both hydraulic action and/or abrasion are more effective (1) Increased discharge increases load (1) which in turn increases abrasion (1) Accept any other appropriate response	(2)

Question	Answer	Marks
3(c)	Award one mark for each reason, and a further one mark for a development of how this impacts on storm hydrographs to a maximum of two marks each. More urbanisation (1) increases rates of run-off (or equivalent idea e.g. reduces infiltration) and/or more water in the river/ higher discharge (1) Changing agricultural practices/ land use (1) such as ploughing land previously left in grass which will increase runoff (1) Deforestation/Afforestation (1) affects interception and infiltration rates so changing run-off and thus lag-times (1) Climate change my increase/decrease storminess (1) which will affect lag-times because of changes in infiltration/run off relationships (1) Human management of rivers e.g. levees (1) maintains more water in the channel (1) Do not credit opposite as in afforestation/ deforestation. Accept any other appropriate response	(4)

Question	Indicative content
4	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • The reason for varied rainfall patterns is largely determined by the influence of altitude. • Higher areas are not just wetter but also colder. • The significance of this is historic in that these areas had a lower carrying capacity because of limitations on the Thermal Growing Season. • Soils are also poorer because rates of high rainfall and, in winter especially faster rates of weathering and mass transport which limit their development. • In more challenging areas crops cannot be grown and so pastoral/grazing land-use is an adaptation to those limitations. • Strong relationship despite technology diminishing impact of physical factors so 'lag effect'. • Other factors will have an influence – not least altitude and glaciated landscapes with poor soils. AO4 (4 marks) • Scotland's land-use is dominantly farmland. • Much of Scotland is made up of poor quality farmland – appears to be over 50%. • Intermediate quality farmland takes up another 40%. • Very little high-quality farmland. • There is a very close relationship between rainfall and land-use. • Almost all areas with precipitation > 1500 mm are 'poor quality farmland. • But not quite all – areas of north-east Scotland, Shetland (islands) and Outer Hebrides have poor farmland but relatively modest rainfall. • High quality farmland is exclusively in the east which has much lower rainfalls – in some places <600mm. • Settlements appear to be almost exclusively in low rainfall areas and close to high quality farmland areas.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)(i)	C – Just over 10 million (add together last two categories = 10.09) All other answers are self-evidently wrong.	(1)

Question number	Answer	Marks
5(a)(ii)	Allow one mark for correct answer 44.1 - and second mark for correct method. 14.49 + 8.47 =22.96/52.07 x100 (1) = 44.1 % (1)	(2)

Question number	Answer	Marks
5(a) (iii)	Allow one mark for each reason. It is cheaper for employers to employ women e.g. zero-hours contracts (1) Gender equality movements have made it easier for women to get jobs (1) The population has grown (1) Women are having fewer children so more available for work (1) The growth of the tertiary sector e.g. retail, health care, child care which traditionally are dominated by women (1) Availability/affordability of child minders improved therefore liberating women for work (1) More female students now, many of whom seek part-time work (1) Accept any other appropriate response	(2)

Question number	Answer	Marks
5 (b)	Award one mark for basic reason, either positive or negative, and a second through an extension which might be an application of that idea or an example of a particular industry/location/company. Reduction in job opportunities (1) because of off-shoring by companies (1) who are seeking lower costs e.g. labour (1) Increase in some sectors e.g. vehicle manufacturing (1) as TNCs move production into the UK e.g. Honda/Nissan (1) Increase in high-end manufacturing (1) as low-end jobs move offshore (1) Accept any other appropriate response	(2)

Question number	Answer	Marks
6 (a)(i)	C = Kingston upon Thames (score = 64-72) Other three are Lambeth 51-53, Enfield 54-56, Islington 48-50	(1)

Question number	Answer	Marks
6(a)(ii)	Allow one mark for any reasonable expression of the following idea. Where child poverty is higher GCSE scores are lower (1)	(1)

Question number	Answer	Marks
6 (a)(iii)	Award one mark for identifying a basic reason for variation and a further mark for expansion/application of that idea that clarifies relationship. Some parts of the city badly affected by deindustrialisation (1) so fewer jobs thus low household income (1) Some areas have a lack of available jobs (1) so high unemployment thus low household income (1) Some parts of the city dominated by social/council/municipal housing (1) which is relatively cheaper thus more households in poverty (1) Some parts of the city have large migrant communities (1) who have obstacles in accessing higher paid jobs e.g. poor language skills thus more households in poverty (1) All of these have possible opposites as in Some parts dominated by high cost housing (1) which suggests high income households so low poverty rates (1) Accept any other appropriate response	(2)

Question number	Answer	Marks
6 (b)	Award one mark for identifying the basic cause of a functional change (allow globalisation as a basic cause) and a further mark for expansion/application of that cause to inner city areas. Specific detail will depend on chosen UK city but expect.. Growth of finance and business services (1) as globalisation has promoted growth of service sector TNCs (e.g. banks) and/or governments have promoted and encouraged inward investment (1) Growth of education/universities (1) as governments have encouraged tertiary education (1) Deindustrialisation as secondary sector has moved/closed (1) because of globalisation and/or changes in infrastructure e.g. containerisation (1) Growth of sports/recreation (1) with government investment aimed at regeneration (1) Building of new residential areas (1) because of growing demand for labour in central city (1) Growth of diverse religious and cultural places (1) as a result of immigration (1) Accept any other appropriate response	(4)

Question number	Answer	Marks
6(c)	Award one mark for outlining/explaining a basic cause of change in surrounding accessible rural areas and a further mark or marks for expansion/application of that change to illustrate how exactly it changes. Specific detail will depend on chosen UK city but expect.. Urban sprawl into surrounding rural areas (1) has had an economic impact through creation of new jobs/type of employment (1) example or further development of same (1) Demand for housing has increased (1) has had impact on house prices (1) pricing out locals (1) example or further development of same (1) Impact on rural services (1) with changing pattern of demand (1) reflecting changing social/economic status of incomers (1) example or further development of same (1)	(4)

	Communities have experienced in-migration of commuters (1) who have different social background/attitudes (1) impacting on local institutions (1) example or further development of same (1) Accept any other appropriate response	

Question	Indicative content
7	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • Likely to be driven by employment opportunities so growing areas more likely to attract immigrants e.g. London and south-east, but especially London • 'Older' commonwealth migrants significant in northern/midland cities as a result of post-war employment opportunities and active overseas recruitment post-Windrush • Urban areas generally have wider range of jobs so more attractive thus urban centres have most of the migrants • EU migrants attracted by London jobs especially in finance and business services • Jobs in rural areas likely to be seasonal jobs in agriculture • Consequences likely to be real and perceived shortages of services – strain in education, housing and health • However migrants fill important gaps in labour market; especially in Health Service • May have social consequences of increases in racial tensions AO4 (4 marks) • The basic pattern is very uneven • London dominates the >15.1% areas • Only 7 areas have less than 2.5% (all) foreign born- 122 have more than 10% - over a third of the total • However, the <5% is nearly 100 areas but many of these are large so map is a little deceptive • Half of England and Wales areas have less than 2.5% EU migrants – • Concentrations of migrants in south coast cities and Oxford/Cambridge • Western areas have relatively few foreign born including Southwest, Wales and Cumbria

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Award one mark for focus on at least one element of the table (1) with suggested relationship to another both clear and legitimate (1) Is there a relationship between rock type (1) and the range of gradients found at both locations (1) The coarser the beach material (1) the steeper the gradient (1) Is there a significant difference between the gradients (1) at the two locations (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (a) (ii)	Award one mark for identifying a legitimate reason for location selection and a further mark for applying it to this context Location driven by need to select different rock types (1) that would offer a viable contrast (1) Locations needed to be accessible (1) for safety reasons (1) Locations needed to be close to school/centre (1) to allow time for data collection (1) Do not allow comments about factors which might impact on the timing of the trip rather than its location e.g. weather conditions Allow any other appropriate response	(4)

Question number	Answer	Marks
8 (a) (iii)	Award marks for any legitimate point which accurately describes any aspect of the data collection. In general, the Boulder Clay beach has steeper gradients (1) range 5^{o} to 7^{o} (1) whereas Sandstone beach has 3^{o} to 5^{o} range (1) Range of values on Boulder Clay beach makes mean much less useful as guide (1) 15^{o} to 2^{o} as opposed to max range of 8^{o} to 2^{o} on Sandstone beach (1) Minimum gradient measures very similar (1) range 2^{o} to 4^{o} (1)	(4)

	Limit to 3 marks if only one location is described Allow any other appropriate response	

Question Number		Indicative content
8 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Reference should be made to the results of data collection in terms of specific locations and the relationship with management of coastal communities. • Conclusions reached should be clear with references, not only to the secondary data but also primary data could be considered and how it supports the interpretation of secondary data. Does it reinforce or conflict? • Assessment should include how easy it was to access and use the secondary data, e.g. the correspondence between primary data collection at specific sites whereas much of the secondary data is areal. • Reliability might be considered in terms of the age of the secondary data. • Assessment address the correspondence between secondary data sources and the results of primary data collection • Importance likely to be critical given focus coastal management AO4 • Might include coastal management plans mostly derived from ICZM plans downloaded from the internet. • Might include maps, present and past to show changes in the coastal environment. • Might include meteorological data to examine trends in storm events. • Might include local plans including local land-use zoning which suggest priorities for coastal protection. • Might include local and national news sources covering historic events which impact on current policies. • Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a)(i)	Award one mark for focus on at least one element of the table (1) with suggested relationship to another both clear and legitimate (1) Is there a relationship between rock type (1) and the range of gradients found at both locations (1) The coarser the bedload (1) the steeper the gradient (1) Is there a significant difference between the gradients (1) at the two sites (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (a) (ii)	Award one mark for identifying a legitimate reason for location selection and a further mark for applying it to this context Location driven by need to select different rock types (1) that would offer a viable contrast (1) Locations needed to be accessible (1) for safety reasons (1) Locations needed to be close to school/centre (1) to allow time for data collection (1) Do not allow comments about factors which might impact on the timing of the trip rather than its location e.g. weather conditions Allow any other appropriate response	(4)

Question number	Answer	Marks
9 (a) (iii)	Award marks for any legitimate point which accurately describes any aspect of the data collection. In general, the Sandstone river has steeper gradients (1) range 12^{o} to 7^{o} (1) whereas Boulder Clay river has 7^{o} to 3^{0} range (1) Range of values on Sandstone river > Boulder Clay (1) 12^{o} to 4^{o} as opposed to range of 7^{o} to 3^{o} on Boulder Clay (1) More consistent decline ingredient on BC than Sandstone(1) data to support (1)	(4)

	Limit to 3 marks is a simple list of descriptive that pays no attention to the comparative aspects of the data collection processes Allow any other appropriate response	

Question Number		Indicative content
9 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Reference should be made to the results of data collection in terms of specific locations and the relationship flood risk for people and property • Conclusions reached should be clear with references, not only to the secondary data but also primary data could be considered and how it supports the interpretation of secondary data. Does it reinforce or conflict? • Assessment should include how easy it was to access and use the secondary data, e.g. the (lack of) correspondence between primary data collection at specific sites whereas much of the secondary data is areal. • Reliability might be considered in terms of the age of the secondary data. • Assessment address the correspondence between secondary data sources and the results of primary data collection • Importance likely to be critical given focus on flood management AO4 • Might include Environment Agency flood risk maps. • Might include past maps to show changes in the local environment especially building on the flood plain • Might include meteorological data to examine trends in storm events. • Might include local plans including local land-use zoning which suggest priorities for flood protection. • Might include local and national news sources covering historic events which impact on current policies. • Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
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Question number	Answer	Marks
10 (a)	Award one mark for identifying a legitimate reason and a further mark for developing that idea. It was close to our school/centre (1) so we could spend enough time there (1) Area is varied so that we could get a range of results (1) allowing proper contrasts (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
10 (b)	Award one mark each for following; Sketch map gives clear indication of location e.g. local street names, specific and local places of interest (1) Sketch map has at least one of key/scale/north point (1) Annotations (either on diagram or in text) explain two criterion for selection which may include; distance apart on a transect (1) trying to select particular locations to show contrasts (1) health and safety considerations (1) attempt to stratify data selection (1) Allow any other appropriate response	(4)

Question number	Answer	Marks
10 (c)	Award one mark for basic point and further mark(s) for the development of that point. Because the sites selected for data collection were unrepresentative (1) so do not reflect the range of variation in chosen location (1) example/reasons for same (1) Because the sample size was not large enough (1) and so results may not be an accurate reflection of 'population' (1) example/reasons for same (1) Because of the range/limited number of sites/wrong day/timings (1) example/reasons for same (1) Because the sampling procedures were unrepresentative (1) and so don't reflect the overall population (1) example/reasons for same (1) Because not all the results were accurate (1) because of data gathering issues (1) example/reasons for same (1) Allow any other appropriate response	(4)

Question Number	Indicative content
10 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Economic and environmental data have improved but social data much more mixed • The evidence is partial based of 40 questionnaires from an unknown total population. • 40 'sampled' are very unlikely to be the same people. • 'Randomly selected residents' may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations. • The problems offered may not have included all of the problems that residents would have recorded if they were allowed a free choice. • This is a perception study and, as such, may not accurately reflect the reality of either of these environments. • Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study. AO4 • The results are not totally transparent. • Some measures (housing and jobs) have both improved. • So too litter and pollution • Other data is more mixed – transport better and slight improvement in local services. • Elderly people's situation apparently uncharged but young people's support is perceived as worse as is crime. • So general conclusion would be that the situation has improved on the weight of positive/negative view(s) • Reinforced by the fact that the top 6 categories have all either improved or remained unchanged.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
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Question number	Answer	Marks
11 (a)	Award one mark for identifying a legitimate reason and a further mark for developing that idea. It was close to our school/centre (1) so we could spend enough time there (1) Area is varied so that we could get a range of results (1) allowing proper contrasts (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
11 (b)	Award one mark each for following; Sketch map gives clear indication of location e.g. local street names, specific and local places of interest (1) Sketch map has at least one of key/scale/north point (1) Annotations (either on diagram or in text) explain two criterion for selection which may include; distance apart on a transect (1) trying to select particular locations to show contrasts (1) health and safety considerations (1) attempt to stratify data selection (1) Allow any other appropriate response	(4)

Question number	Answer	Marks
11 (c)	Award one mark for basic point and further mark(s) for the development of that point. Because the sites selected for data collection were unrepresentative (1) so do not reflect the range of variation in chosen location (1) example/reasons for same (1) Because the sample size was not large enough (1) and so results may not be an accurate reflection of 'population' (1) example/reasons for same (1) Because of the range/limited number of sites/wrong day/timings (1) example/reasons for same (1) Because the sampling procedures were unrepresentative (1) and so don't reflect the overall population (1) example/reasons for same (1) Because not all the results were accurate (1) because of data gathering issues (1) example/reasons for same (1) Allow any other appropriate response	(4)

Question Number	Indicative content
11 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Economic and environmental data have improved but social data much more mixed • The evidence is partial based of 40 questionnaires from an unknown total population. • 40 'sampled' are very unlikely to be the same people. • 'Randomly selected residents' may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations. • The problems offered may not have included all of the problems that residents would have recorded if they were allowed a free choice. • This is a perception study and, as such, may not accurately reflect the reality of either of these environments. • Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study. AO4 • The results are not totally transparent. • Some measures (housing and jobs) have both improved. • So too litter and pollution • Other data is more mixed – transport better and slight improvement in local services. • Elderly people's situation apparently uncharged but young people's support is perceived as worse as is crime. • So general conclusion would be that the situation has improved on the weight of positive/negative view(s) • Reinforced by the fact that the top 6 categories have all either improved or remained unchanged.

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Write your name here

Surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Geography B

Paper 2: UK Geographical Issues

Tuesday 5 June 2018 – Afternoon
Time: 1 hour 30 minutes

Paper Reference
1GB0/02

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it
- Check your answers if you have time at the end.

Turn over ▶

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SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1 which is a photograph of a landscape in southern England.



Figure 1

(a) Identify which **one** of the following is the most likely rock type of this landscape.

(1)

☒ **A** Granite

☒ **B** Schist

☒ **C** Chalk

☒ **D** Clay

(b) Identify which **one** of the following is an igneous rock.

(1)

☒ **A** Granite

☒ **B** Schist

☒ **C** Chalk

☒ **D** Clay

DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA

(c) Explain **one** difference in the climates of uplands and lowlands in the UK.

(2)

.....

.....

.....

.....

(Total for Question 1 = 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

2 (a) Study Figure 2 which is a photograph of part of the coastline of Suffolk, looking northwards.



Figure 2

(i) State the process that moves sediment along this coastline.

(1)

.....

(ii) Identify which **one** of the following is the most likely direction of sediment movement along this coastline.

(1)

- ☒ **A** east to west
- ☒ **B** north to south
- ☒ **C** south to north
- ☒ **D** west to east

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(iii) Explain **one** reason for your answer to (a)(ii).

(2)

(b) Explain why there is an increasing risk of coastal flooding on many UK coastlines.

(4)

(Total for Question 2 = 8 marks)

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3 Study Figure 3 which is a hydrograph showing the changing discharge of the River Thames at Kingston during a major flood event.

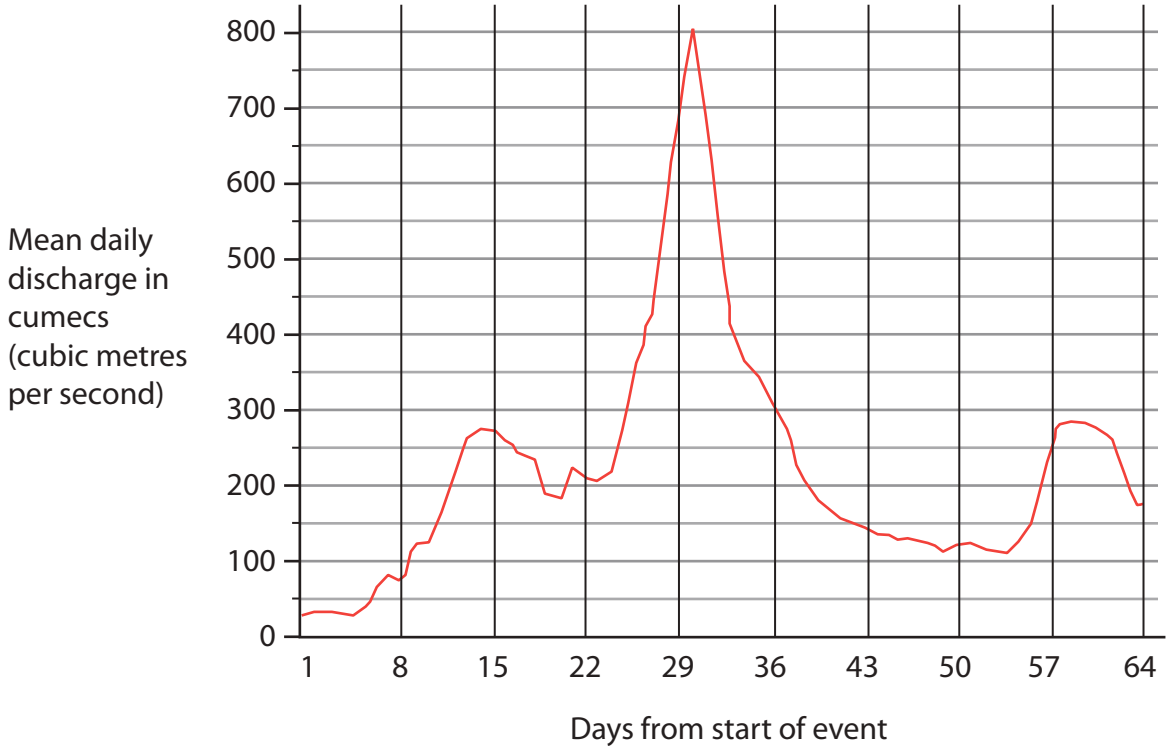


Figure 3

(a) Identify which **one** of the following is the best description of this flood event.

(1)

- ☒ **A** Discharge exceeded 500 cumecs for over 20 days.
- ☒ **B** Peak discharge was 1000 cumecs higher than discharge on Day 1.
- ☒ **C** Peak discharge was over 20 times higher than discharge on Day 1.
- ☒ **D** Discharge was highest on Day 58.

(b) Explain **one** reason why high discharge is likely to increase erosion.

(2)

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(c) Explain **two** ways in which human activities can affect storm hydrographs.

(4)

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(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 4a and Figure 4b which show data about the climate and land use of Scotland.

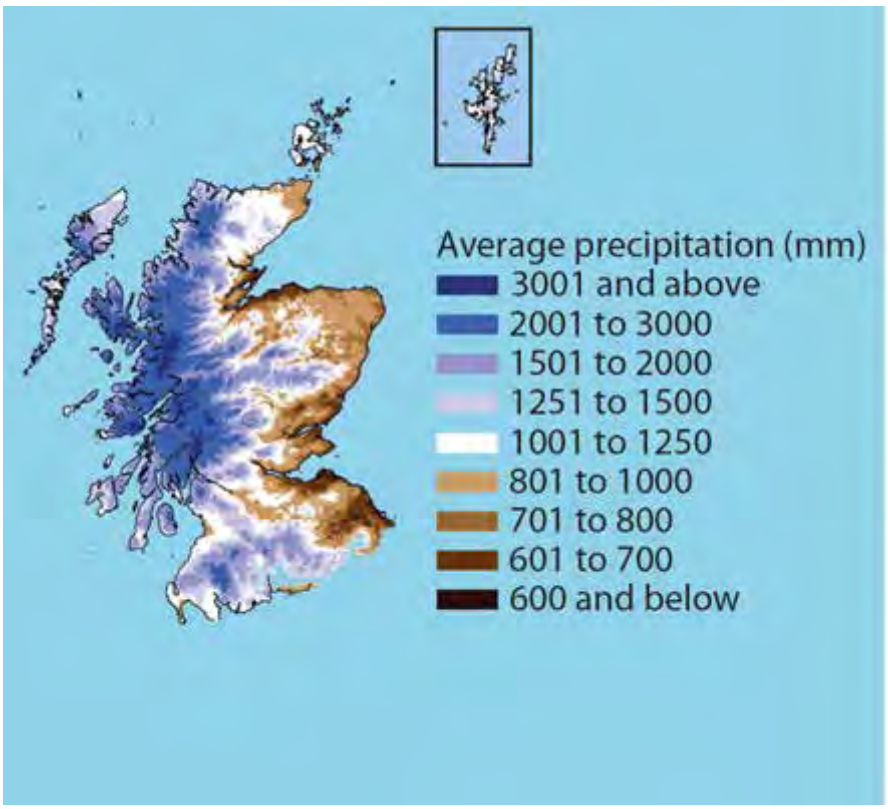


Figure 4a

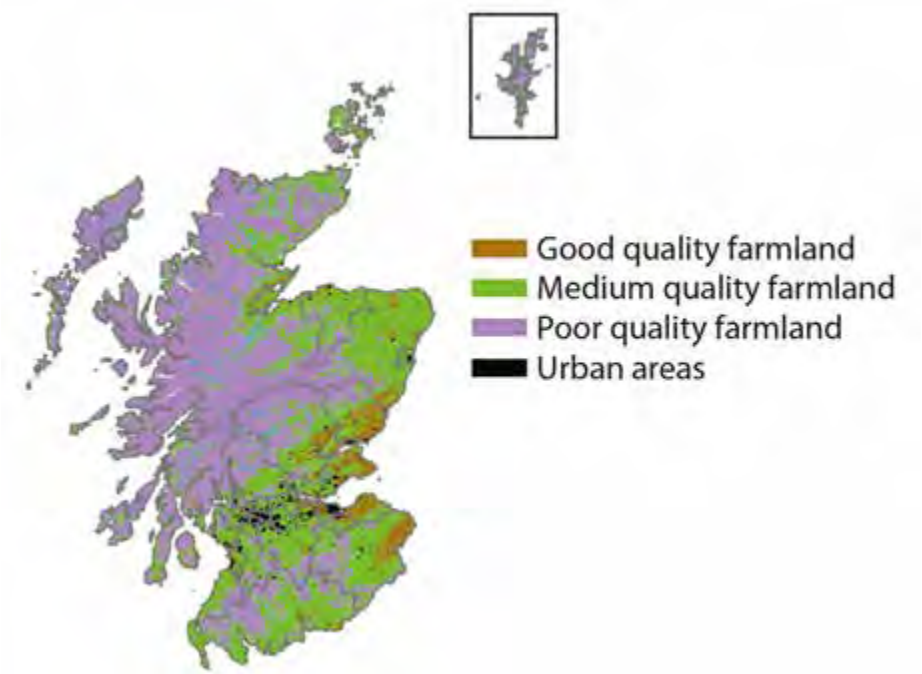


Figure 4b

- Figure 4a shows the annual average precipitation for Scotland.
- Figure 4b shows the land use of Scotland.

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Assess the influence of precipitation on land use in Scotland.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions in this section. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 5 which shows the employment status of men and women aged 16 and over in the UK for 2016.

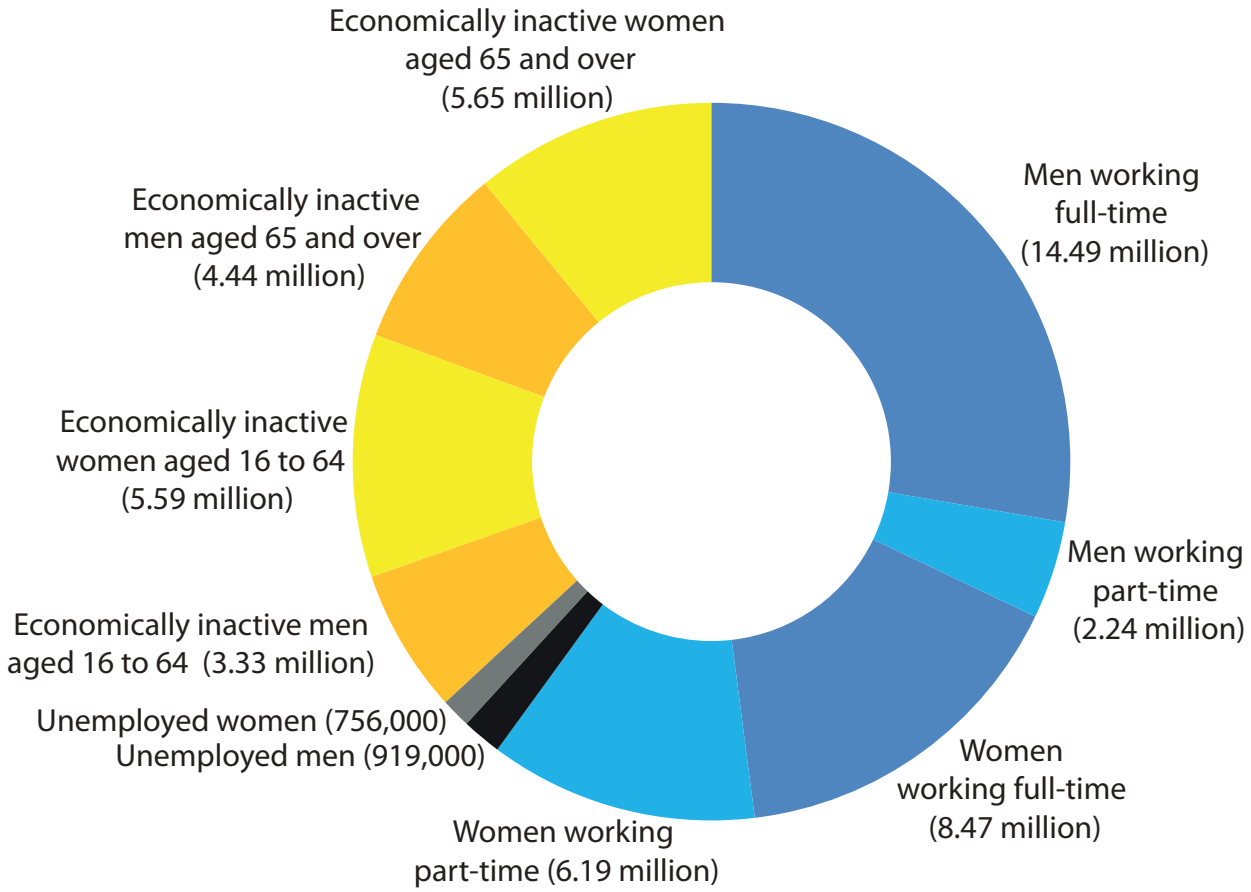


Figure 5

(i) Identify which **one** of the following is the total number of economically inactive men and women aged 65 and over.

(1)

☒ Just over 5 million

☒ Just over 20 million

☒ Just over 10 million

☒ Just over 15 million

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(ii) Calculate the percentage of the population aged 16 and over who were in full-time employment in 2016.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

.....%

(iii) State **two** possible reasons why employment of women has grown in recent years.

(2)

1 .....

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2 .....

.....

(b) Explain **one** impact of globalisation on secondary sector employment in the UK.

(2)

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(Total for Question 5 = 7 marks)

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Dynamic UK Cities

6 (a) Study Figure 6a which shows variations in GCSE scores in the London Boroughs and Figure 6b which shows both GCSE scores and variations in child poverty.

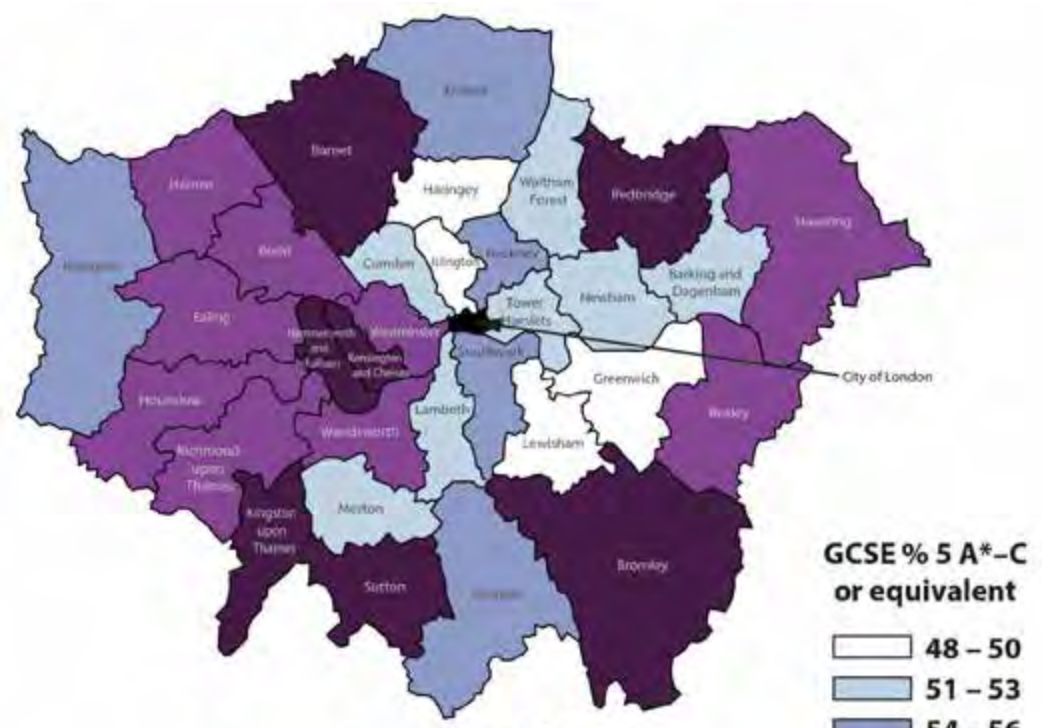
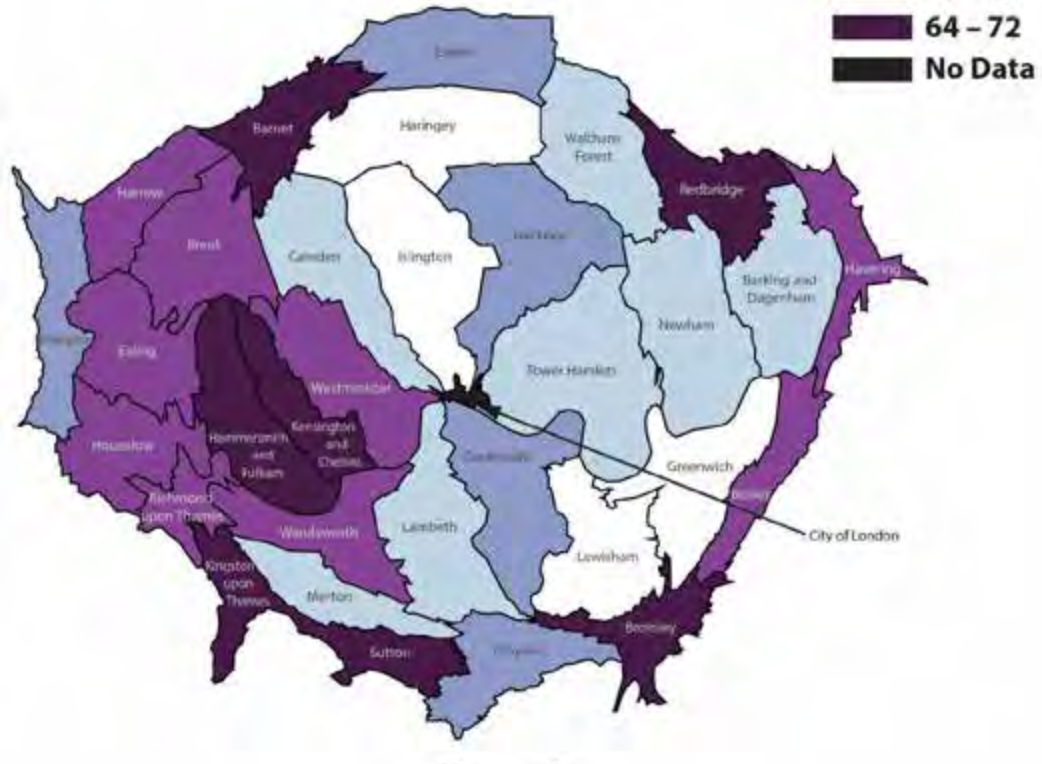


Figure 6a



The size of the Borough compared to Figure 6a is scaled according to levels of child poverty so, for example, when a borough is larger than shown on Figure 6a it has high child poverty

Figure 6b

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(i) Identify which **one** of the following London boroughs has the highest GCSE scores.

(1)

- ☒ **A** Lambeth
- ☒ **B** Enfield
- ☒ **C** Kingston upon Thames
- ☒ **D** Islington

(ii) State a relationship between child poverty and GCSE scores that could be investigated.

(1)

.....

.....

(iii) Explain **one** reason why child poverty varies between different parts of a city.

(2)

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(b) For a named UK city, explain **two** reasons why the functions of its inner-city areas have changed in recent years.

Named UK city .....

(4)

1 .....

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2 .....

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(c) For a named UK city, explain why changes in the city have caused economic and social changes in the surrounding accessible rural areas.

Named UK city .....

(4)

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(Total for Question 6 = 12 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be awarded for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 7 which shows the percentage of the population of England and Wales born outside the UK, based on the 2011 Census data.

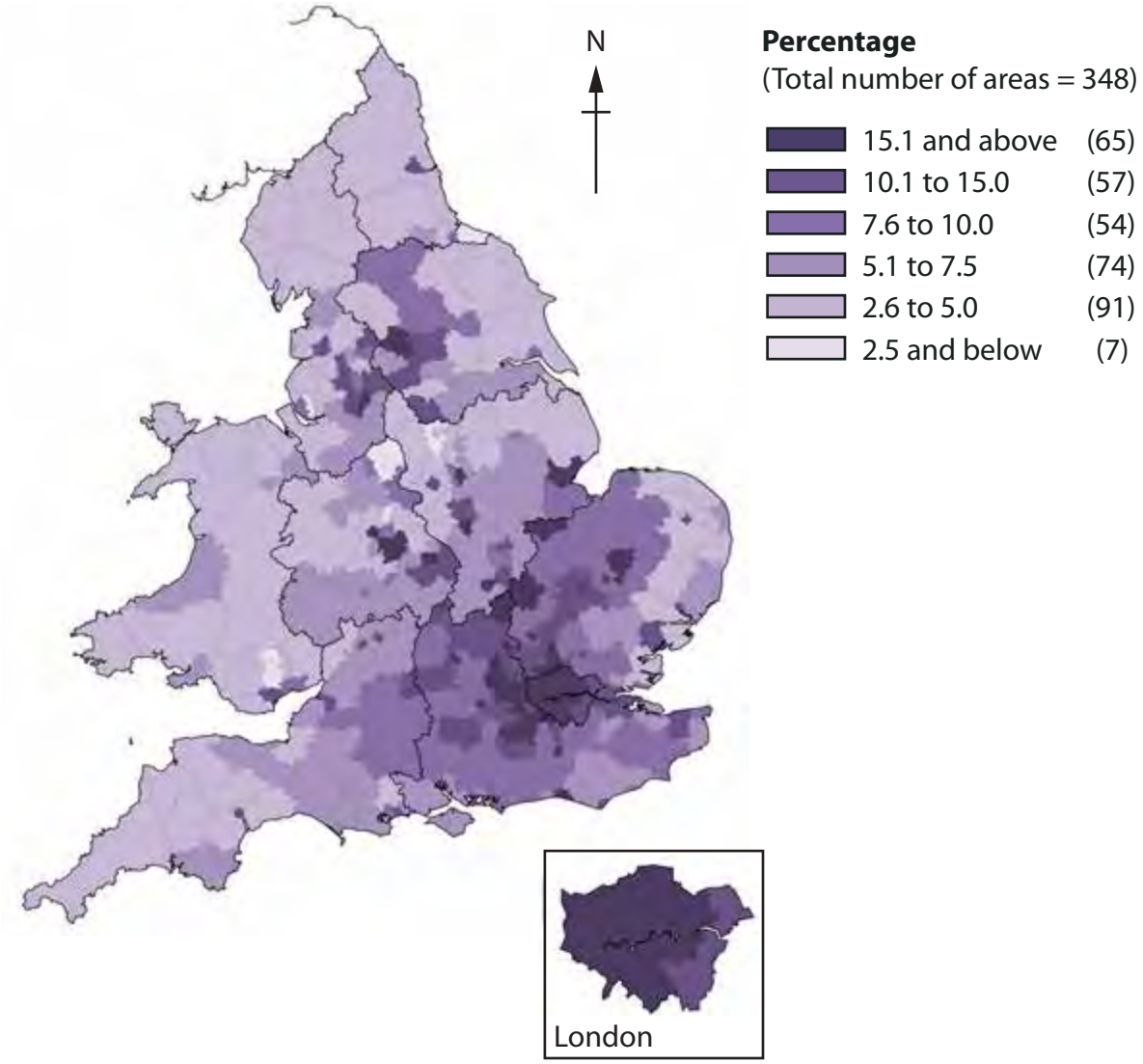


Figure 7

Assess the causes of variations in the distribution shown in Figure 7.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.
Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

If you answer Question 8 put a cross in the box ☐ .

Investigating Coastal Change and Conflict

8 (a) Study Figure 8, which is the data collected by a group of students studying beach profiles in two different locations with contrasting rock types.

- The students measured beach gradient at four sites in two contrasting locations chosen using a geology map.
- They measured beach gradient using ranging poles, tapes and a clinometer.
- At each location they followed a straight line transect measuring gradient at four different positions from the shoreline to the cliff line.

Location 1 **Geology = Boulder Clay**	**Average beach gradient (Degrees°)**	**Maximum beach gradient (Degrees°)**	**Minimum beach gradient (Degrees°)**
Site 1	7°	10°	3°
Site 2	5°	11°	2°
Site 3	6°	12°	2°
Site 4	8°	15°	4°
Location 2 **Geology = Sandstone**	**Average beach gradient (Degrees°)**	**Maximum beach gradient (Degrees°)**	**Minimum beach gradient (Degrees°)**
Site 1	4°	6°	2°
Site 2	5°	7°	2°
Site 3	4°	8°	3°
Site 4	3°	5°	2°

Figure 8

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(i) Suggest a suitable enquiry question that the students could have investigated.

(2)

(ii) Suggest **two** factors which should have been considered when choosing the fieldwork locations.

(4)

1

2

(iii) Describe the results of the students' fieldwork shown on Figure 8.

(4)

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(b) You have carried out your own fieldwork investigating the impact of coastal management on coastal processes and communities.

Name your coastal environment fieldwork location:

Assess the role of secondary data sources in your investigation.

(8)

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(Total for Question 8 = 18 marks)

Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) Study Figure 9, which is the data collected by a group of students studying river gradient changes in two different upland locations with contrasting rock types.

- The students measured river gradient on two different streams at locations chosen using a geology map.
- They measured river gradient at eight sites at each location using ranging poles, tapes and a clinometer.
- The sites were about 1 km apart with Site 1 furthest upstream and Site 8 furthest downstream.

Location 1 – Boulder Clay	**Gradient (degrees°)**	**Location 2 – Sandstone**	**Gradient (degrees°)**
Site 1	7	Site 1	12
Site 2	7	Site 2	8
Site 3	6	Site 3	10
Site 4	6	Site 4	9
Site 5	5	Site 5	4
Site 6	6	Site 6	4
Site 7	4	Site 7	10
Site 8	3	Site 8	7
Average Gradient	**5.5**	**Average Gradient**	**8.0**

Figure 9

(i) Suggest a suitable enquiry question that the students could have investigated.

(2)

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(ii) Suggest **two** factors which should have been considered when choosing the fieldwork locations.

(4)

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(iii) Describe the results of the students' fieldwork shown on Figure 9.

(4)

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(b) You have carried out your own fieldwork investigating how and why drainage basin characteristics influence flood risk for people and property.

Name your river environment fieldwork location:

Assess the role of secondary data sources in your investigation.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.
Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

If you answer Question 10 put a cross in the box ☐ .

Investigating Dynamic Urban Areas

10 You have carried out your own fieldwork investigating environmental quality in an urban area.

Name your urban area:

.....

(a) Explain **one** reason why you chose that urban area.

(2)

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(b) Using an annotated sketch map, explain how you chose your sites or location for data collection.

(4)

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(c) Explain why the conclusions that you reached might be unreliable.

(4)

(d) In 2017 a group of 20 students carried out questionnaires in an urban area on a Wednesday afternoon. They asked 40 randomly selected residents to select the three problems in the area that they rated as the most serious.

They compared these results with the results of a similar survey gathered by students in 2014 who also randomly selected 40 residents.

These two sets of results are shown below.

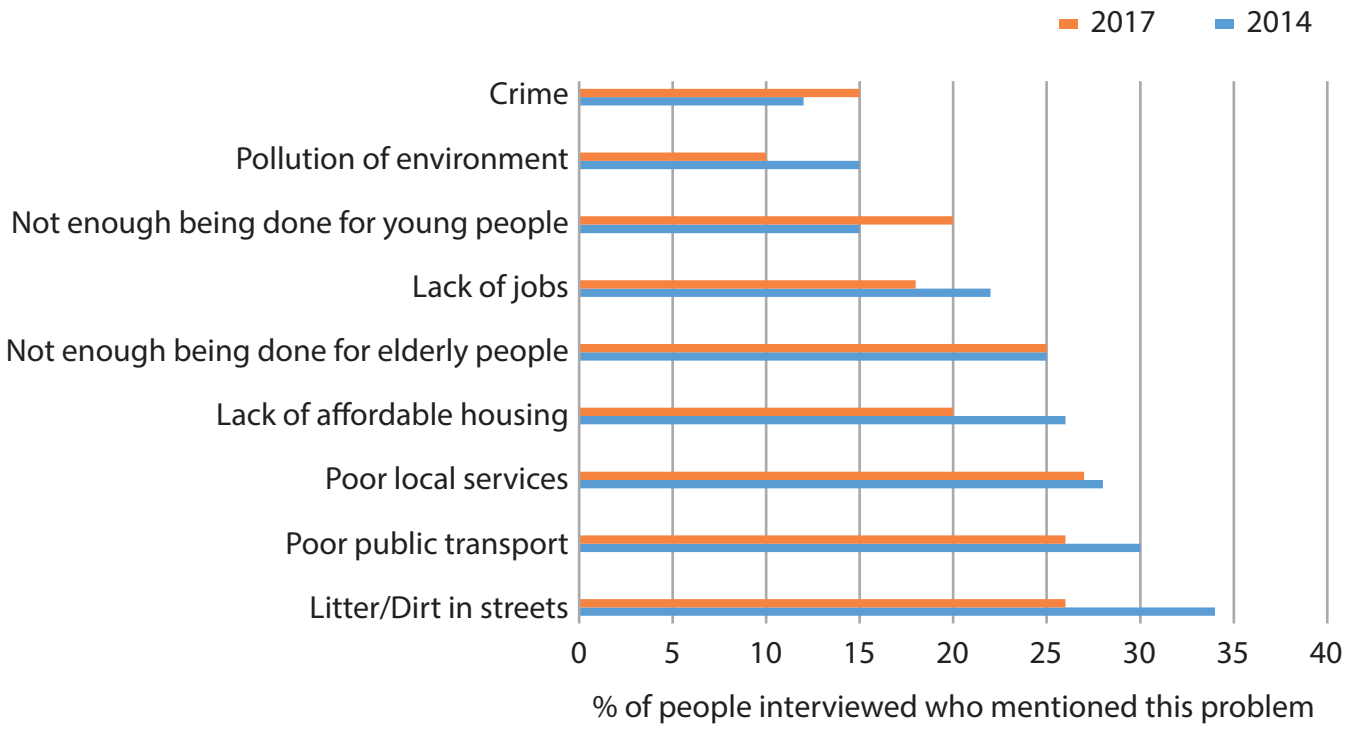


Figure 10

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The students concluded that the social, economic and environmental conditions in the urban area had improved since 2014.

Assess the evidence for this conclusion.

(8)

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(Total for Question 10 = 18 marks)

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Do not answer Question 11 if you have answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Areas

11 You have carried out your own fieldwork investigating environmental quality in a rural area.

Name your rural area:

.....

(a) Explain **one** reason why you chose that rural area.

(2)

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(b) Using an annotated sketch map, explain how you chose your sites or location for data collection.

(4)

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(c) Explain why the conclusions that you reached might be unreliable.

(4)

(d) In 2017 a group of 20 students carried out questionnaires in a rural area on a Wednesday afternoon. They asked 40 randomly selected residents to select the three problems in the area that they rated as the most serious.

They compared these results with the results of the same survey gathered by students in 2014 who also randomly selected 40 residents.

These two sets of results are shown below.

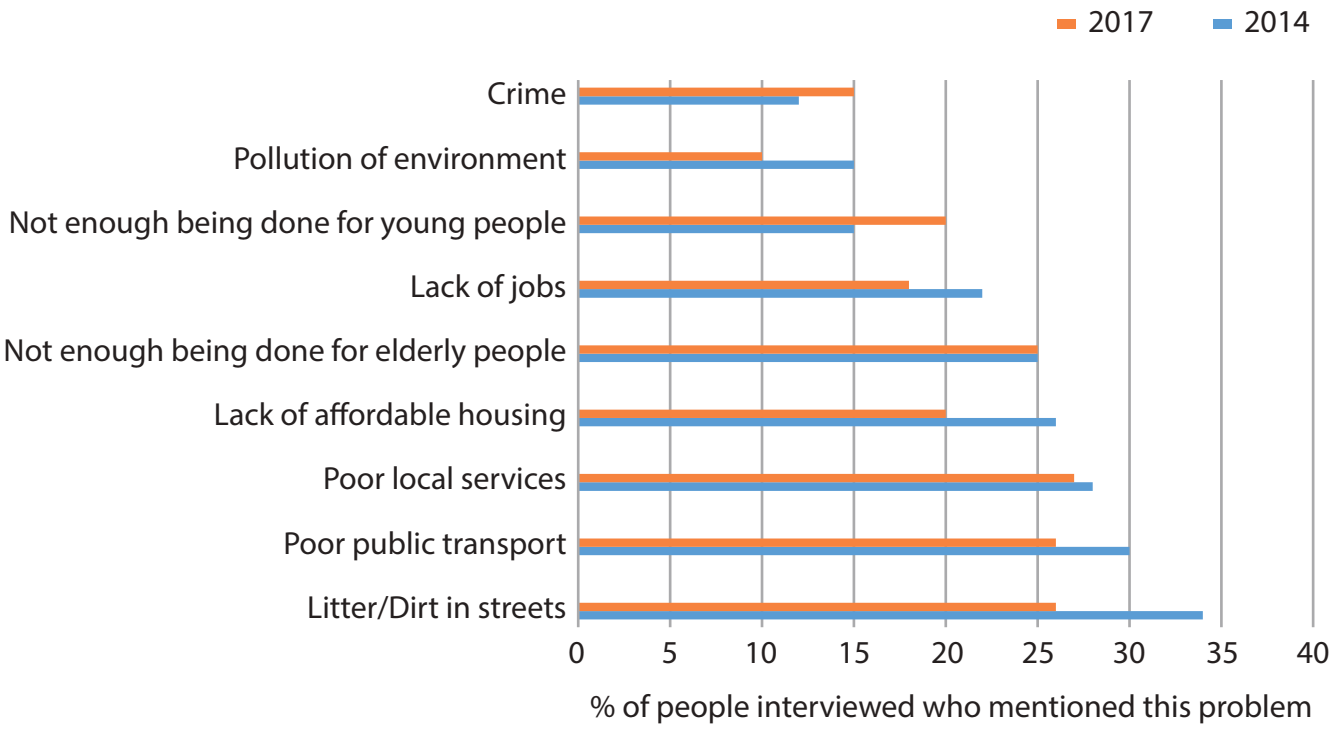


Figure 11

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The students concluded that the social, economic and environmental conditions in the rural area had improved since 2014.

Assess the evidence for this conclusion.

(8)

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Figure 6b - Sourced from: http://mappinglondon.co.uk/2011/gcse-scores-and-poverty-in-london/
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Surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Geography B

Paper 2: UK Geographical Issues

Tuesday 5 June 2018 – Afternoon
Time: 1 hour 30 minutes

Paper Reference
1GB0/02

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it
- Check your answers if you have time at the end.

Turn over ▶

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Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1 which is a photograph of a landscape in southern England.



Figure 1

(a) Identify which **one** of the following is the most likely rock type of this landscape.

(1)

☒ **A** Granite

☒ **B** Schist

☒ **C** Chalk

☒ **D** Clay

(b) Identify which **one** of the following is an igneous rock.

(1)

☒ **A** Granite

☒ **B** Schist

☒ **C** Chalk

☒ **D** Clay

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(c) Explain **one** difference in the climates of uplands and lowlands in the UK.

(2)

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(Total for Question 1 = 4 marks)

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2 (a) Study Figure 2 which is a photograph of part of the coastline of Suffolk, looking northwards.



Figure 2

(i) State the process that moves sediment along this coastline.

(1)

.....

(ii) Identify which **one** of the following is the most likely direction of sediment movement along this coastline.

(1)

- ☒ **A** east to west
- ☒ **B** north to south
- ☒ **C** south to north
- ☒ **D** west to east

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(iii) Explain **one** reason for your answer to (a)(ii).

(2)

(b) Explain why there is an increasing risk of coastal flooding on many UK coastlines.

(4)

(Total for Question 2 = 8 marks)

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3 Study Figure 3 which is a hydrograph showing the changing discharge of the River Thames at Kingston during a major flood event.

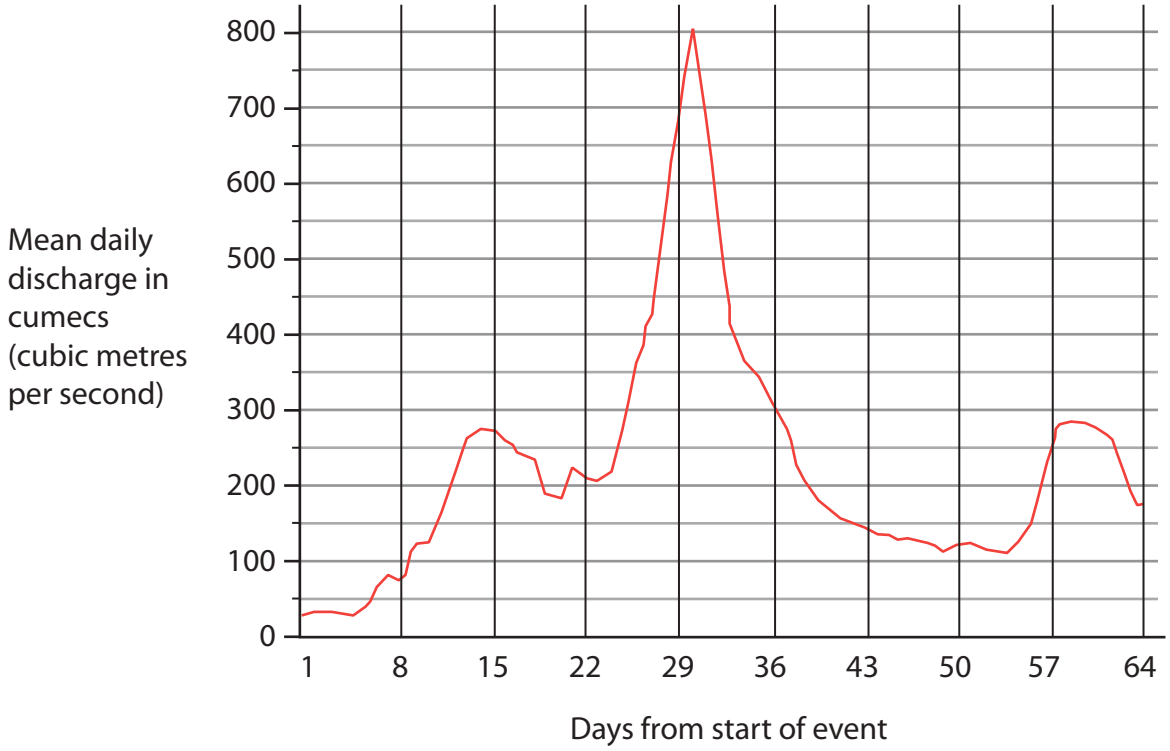


Figure 3

(a) Identify which **one** of the following is the best description of this flood event.

(1)

- ☒ **A** Discharge exceeded 500 cumecs for over 20 days.
- ☒ **B** Peak discharge was 1000 cumecs higher than discharge on Day 1.
- ☒ **C** Peak discharge was over 20 times higher than discharge on Day 1.
- ☒ **D** Discharge was highest on Day 58.

(b) Explain **one** reason why high discharge is likely to increase erosion.

(2)

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(c) Explain **two** ways in which human activities can affect storm hydrographs.

(4)

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(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 4a and Figure 4b which show data about the climate and land use of Scotland.

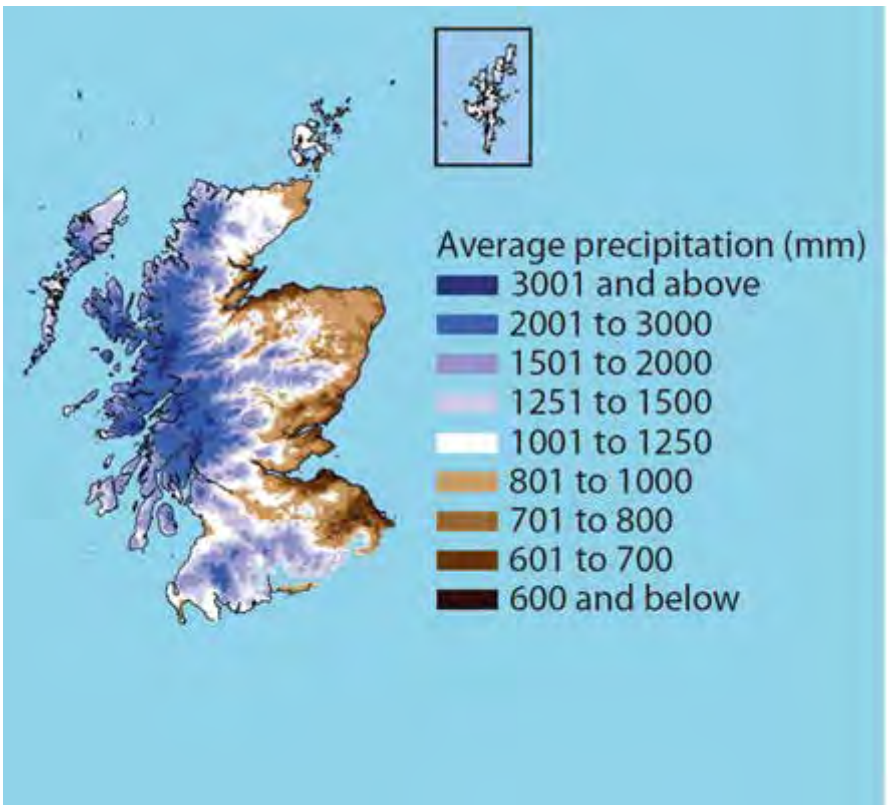


Figure 4a

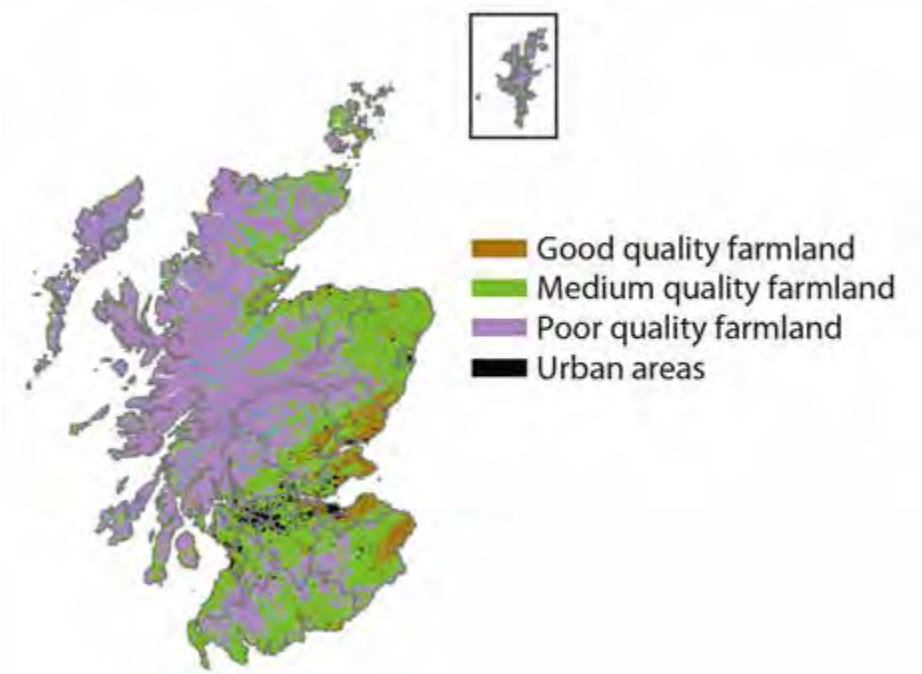


Figure 4b

- Figure 4a shows the annual average precipitation for Scotland.
- Figure 4b shows the land use of Scotland.

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Assess the influence of precipitation on land use in Scotland.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions in this section. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 5 which shows the employment status of men and women aged 16 and over in the UK for 2016.

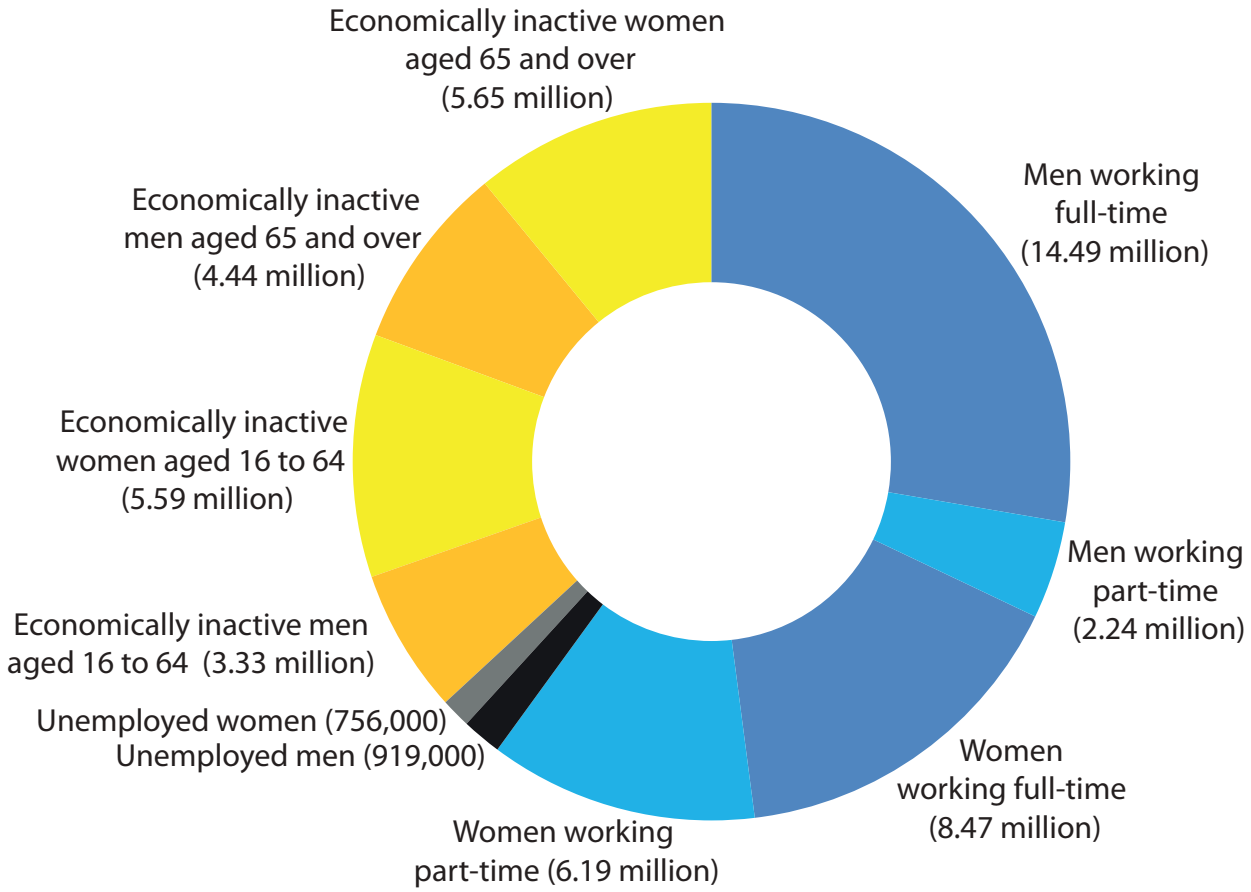


Figure 5

(i) Identify which **one** of the following is the total number of economically inactive men and women aged 65 and over.

(1)

☒ Just over 5 million

☒ Just over 20 million

☒ Just over 10 million

☒ Just over 15 million

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(ii) Calculate the percentage of the population aged 16 and over who were in full-time employment in 2016.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

.....%

(iii) State **two** possible reasons why employment of women has grown in recent years.

(2)

1 .....

.....

2 .....

.....

(b) Explain **one** impact of globalisation on secondary sector employment in the UK.

(2)

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(Total for Question 5 = 7 marks)

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Dynamic UK Cities

6 (a) Study Figure 6a which shows variations in GCSE scores in the London Boroughs and Figure 6b which shows both GCSE scores and variations in child poverty.

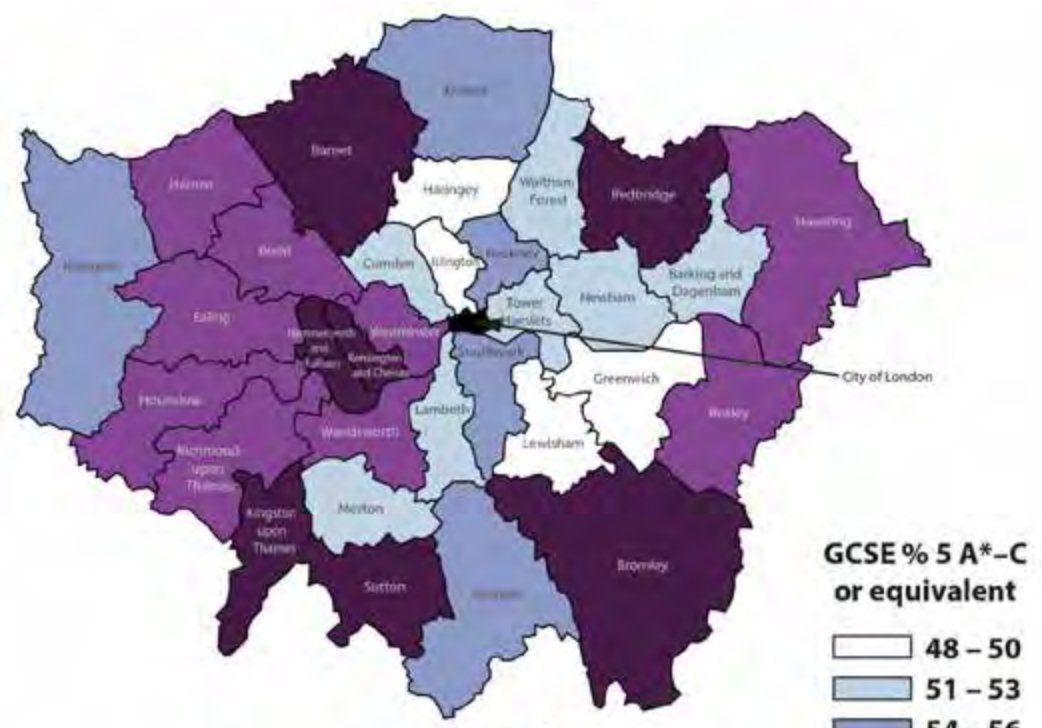
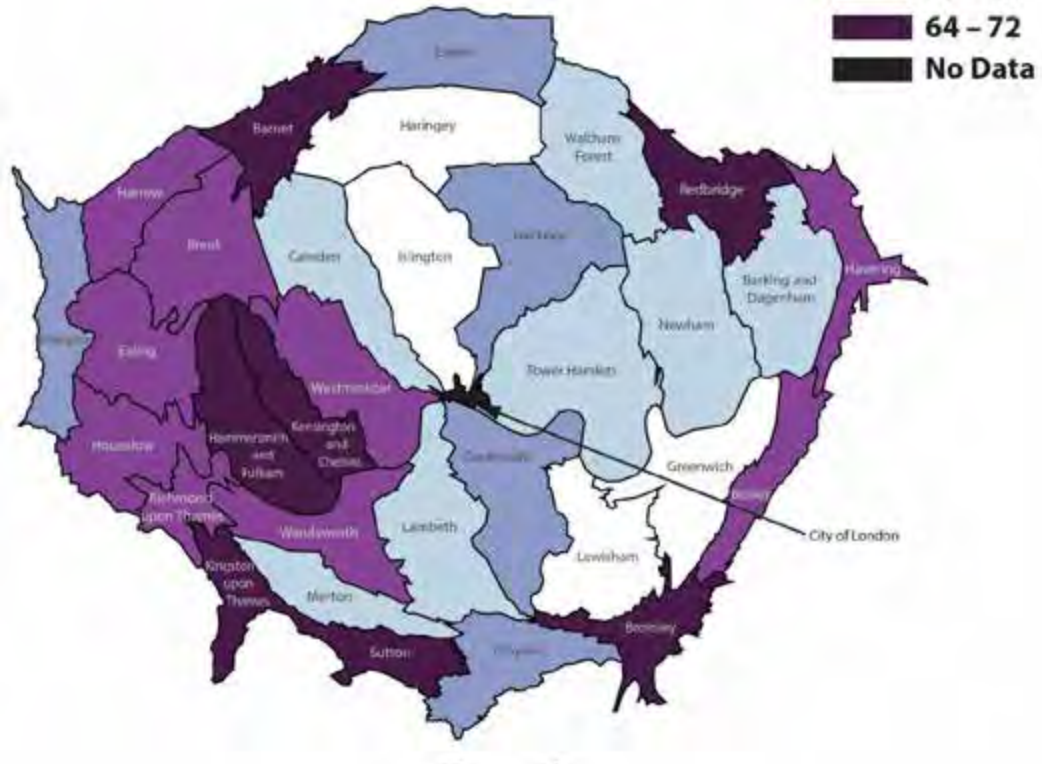


Figure 6a



The size of the Borough compared to Figure 6a is scaled according to levels of child poverty so, for example, when a borough is larger than shown on Figure 6a it has high child poverty

Figure 6b

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(i) Identify which **one** of the following London boroughs has the highest GCSE scores.

(1)

- ☒ **A** Lambeth
- ☒ **B** Enfield
- ☒ **C** Kingston upon Thames
- ☒ **D** Islington

(ii) State a relationship between child poverty and GCSE scores that could be investigated.

(1)

.....

.....

(iii) Explain **one** reason why child poverty varies between different parts of a city.

(2)

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(b) For a named UK city, explain **two** reasons why the functions of its inner-city areas have changed in recent years.

Named UK city .....

(4)

1 .....

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2 .....

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(c) For a named UK city, explain why changes in the city have caused economic and social changes in the surrounding accessible rural areas.

Named UK city .....

(4)

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(Total for Question 6 = 12 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be awarded for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 7 which shows the percentage of the population of England and Wales born outside the UK, based on the 2011 Census data.

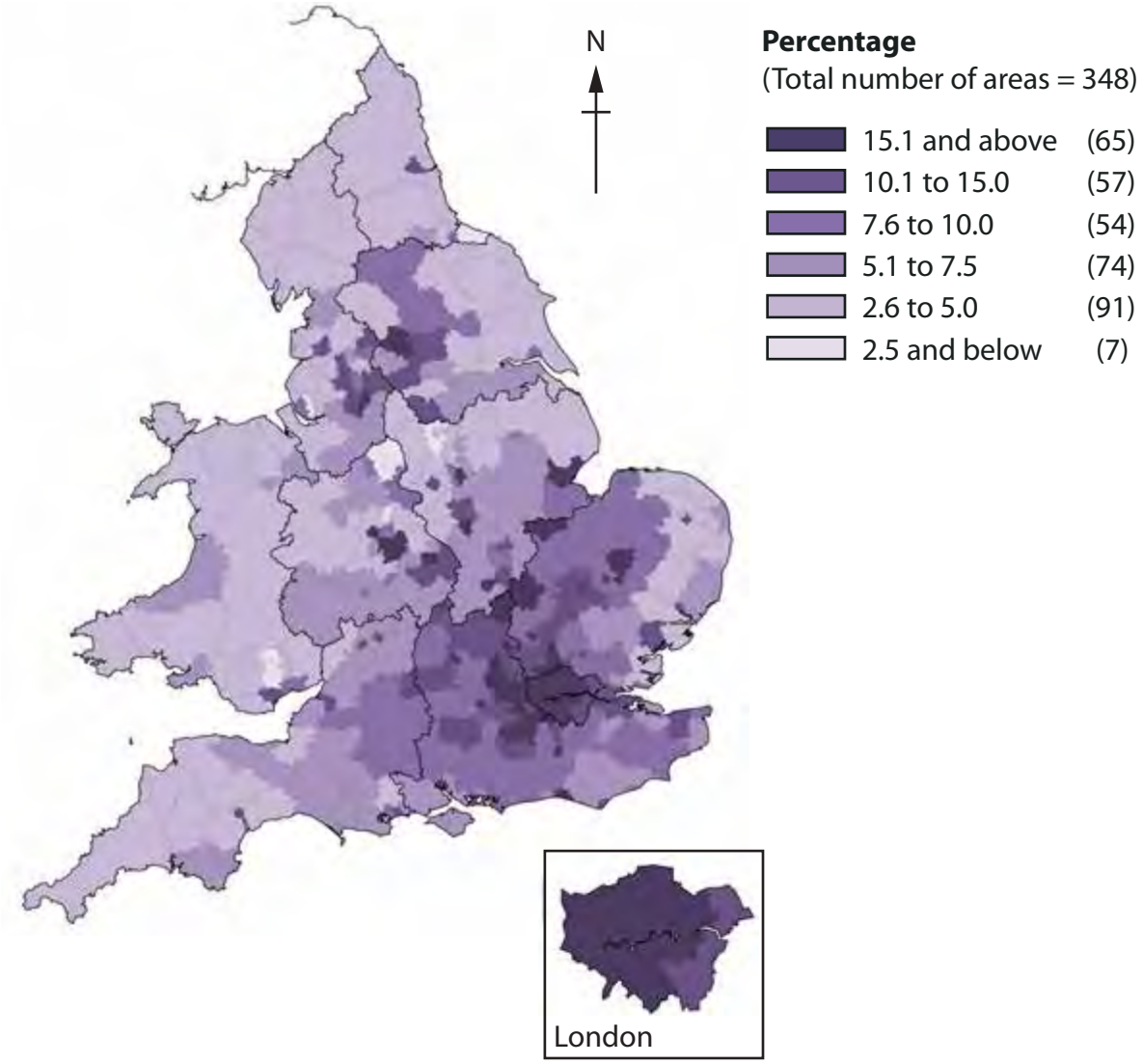


Figure 7

Assess the causes of variations in the distribution shown in Figure 7.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.
Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

If you answer Question 8 put a cross in the box ☐ .

Investigating Coastal Change and Conflict

8 (a) Study Figure 8, which is the data collected by a group of students studying beach profiles in two different locations with contrasting rock types.

- The students measured beach gradient at four sites in two contrasting locations chosen using a geology map.
- They measured beach gradient using ranging poles, tapes and a clinometer.
- At each location they followed a straight line transect measuring gradient at four different positions from the shoreline to the cliff line.

Location 1 **Geology = Boulder Clay**	**Average beach gradient (Degrees°)**	**Maximum beach gradient (Degrees°)**	**Minimum beach gradient (Degrees°)**
Site 1	7°	10°	3°
Site 2	5°	11°	2°
Site 3	6°	12°	2°
Site 4	8°	15°	4°
Location 2 **Geology = Sandstone**	**Average beach gradient (Degrees°)**	**Maximum beach gradient (Degrees°)**	**Minimum beach gradient (Degrees°)**
Site 1	4°	6°	2°
Site 2	5°	7°	2°
Site 3	4°	8°	3°
Site 4	3°	5°	2°

Figure 8

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(i) Suggest a suitable enquiry question that the students could have investigated.

(2)

(ii) Suggest **two** factors which should have been considered when choosing the fieldwork locations.

(4)

1

2

(iii) Describe the results of the students' fieldwork shown on Figure 8.

(4)

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(b) You have carried out your own fieldwork investigating the impact of coastal management on coastal processes and communities.

Name your coastal environment fieldwork location:

Assess the role of secondary data sources in your investigation.

(8)

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(Total for Question 8 = 18 marks)

Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) Study Figure 9, which is the data collected by a group of students studying river gradient changes in two different upland locations with contrasting rock types.

- The students measured river gradient on two different streams at locations chosen using a geology map.
- They measured river gradient at eight sites at each location using ranging poles, tapes and a clinometer.
- The sites were about 1 km apart with Site 1 furthest upstream and Site 8 furthest downstream.

Location 1 – Boulder Clay	**Gradient (degrees°)**	**Location 2 – Sandstone**	**Gradient (degrees°)**
Site 1	7	Site 1	12
Site 2	7	Site 2	8
Site 3	6	Site 3	10
Site 4	6	Site 4	9
Site 5	5	Site 5	4
Site 6	6	Site 6	4
Site 7	4	Site 7	10
Site 8	3	Site 8	7
Average Gradient	**5.5**	**Average Gradient**	**8.0**

Figure 9

(i) Suggest a suitable enquiry question that the students could have investigated.

(2)

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(ii) Suggest **two** factors which should have been considered when choosing the fieldwork locations.

(4)

1 .....

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(iii) Describe the results of the students' fieldwork shown on Figure 9.

(4)

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(b) You have carried out your own fieldwork investigating how and why drainage basin characteristics influence flood risk for people and property.

Name your river environment fieldwork location:

Assess the role of secondary data sources in your investigation.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.
Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

If you answer Question 10 put a cross in the box ☐ .

Investigating Dynamic Urban Areas

10 You have carried out your own fieldwork investigating environmental quality in an urban area.

Name your urban area:

.....

(a) Explain **one** reason why you chose that urban area.

(2)

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(b) Using an annotated sketch map, explain how you chose your sites or location for data collection.

(4)

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(c) Explain why the conclusions that you reached might be unreliable.

(4)

(d) In 2017 a group of 20 students carried out questionnaires in an urban area on a Wednesday afternoon. They asked 40 randomly selected residents to select the three problems in the area that they rated as the most serious.

They compared these results with the results of a similar survey gathered by students in 2014 who also randomly selected 40 residents.

These two sets of results are shown below.

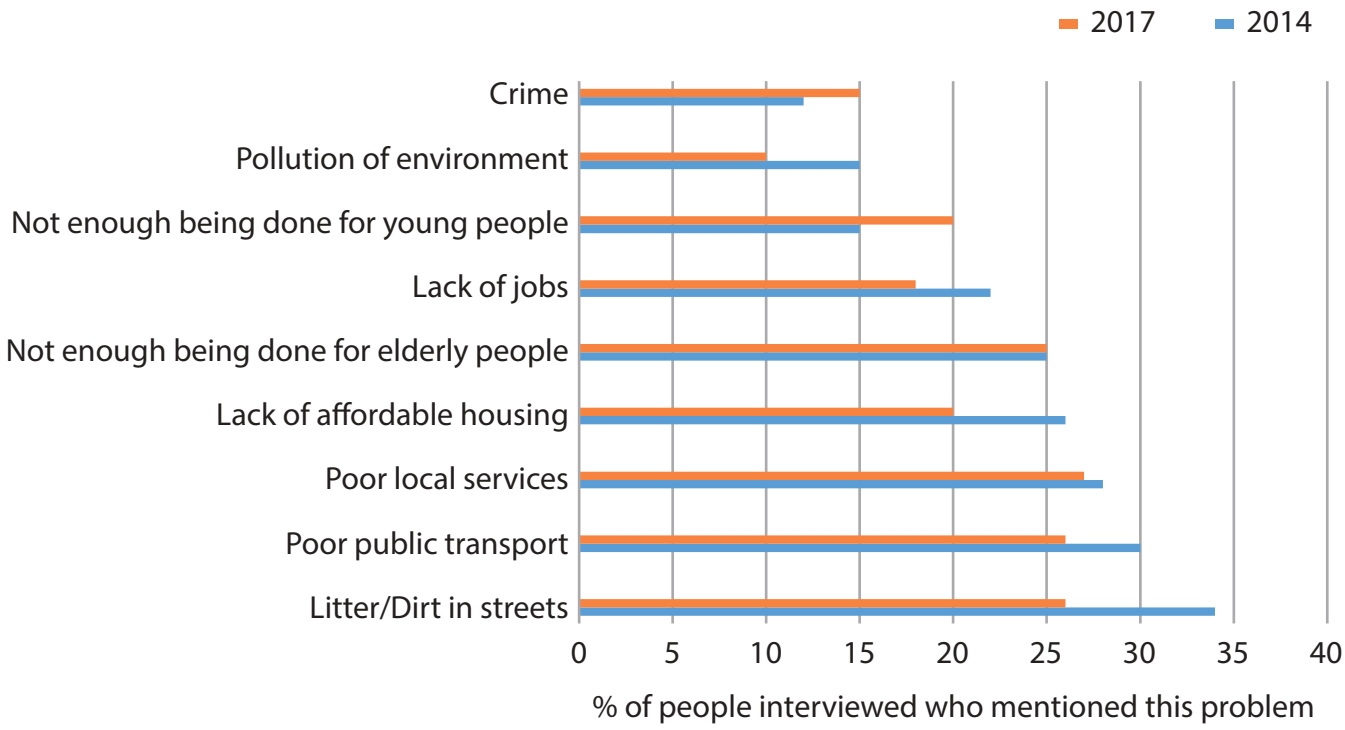


Figure 10

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The students concluded that the social, economic and environmental conditions in the urban area had improved since 2014.

Assess the evidence for this conclusion.

(8)

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(Total for Question 10 = 18 marks)

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Do not answer Question 11 if you have answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Areas

11 You have carried out your own fieldwork investigating environmental quality in a rural area.

Name your rural area:

.....

(a) Explain **one** reason why you chose that rural area.

(2)

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(b) Using an annotated sketch map, explain how you chose your sites or location for data collection.

(4)

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(c) Explain why the conclusions that you reached might be unreliable.

(4)

(d) In 2017 a group of 20 students carried out questionnaires in a rural area on a Wednesday afternoon. They asked 40 randomly selected residents to select the three problems in the area that they rated as the most serious.

They compared these results with the results of the same survey gathered by students in 2014 who also randomly selected 40 residents.

These two sets of results are shown below.

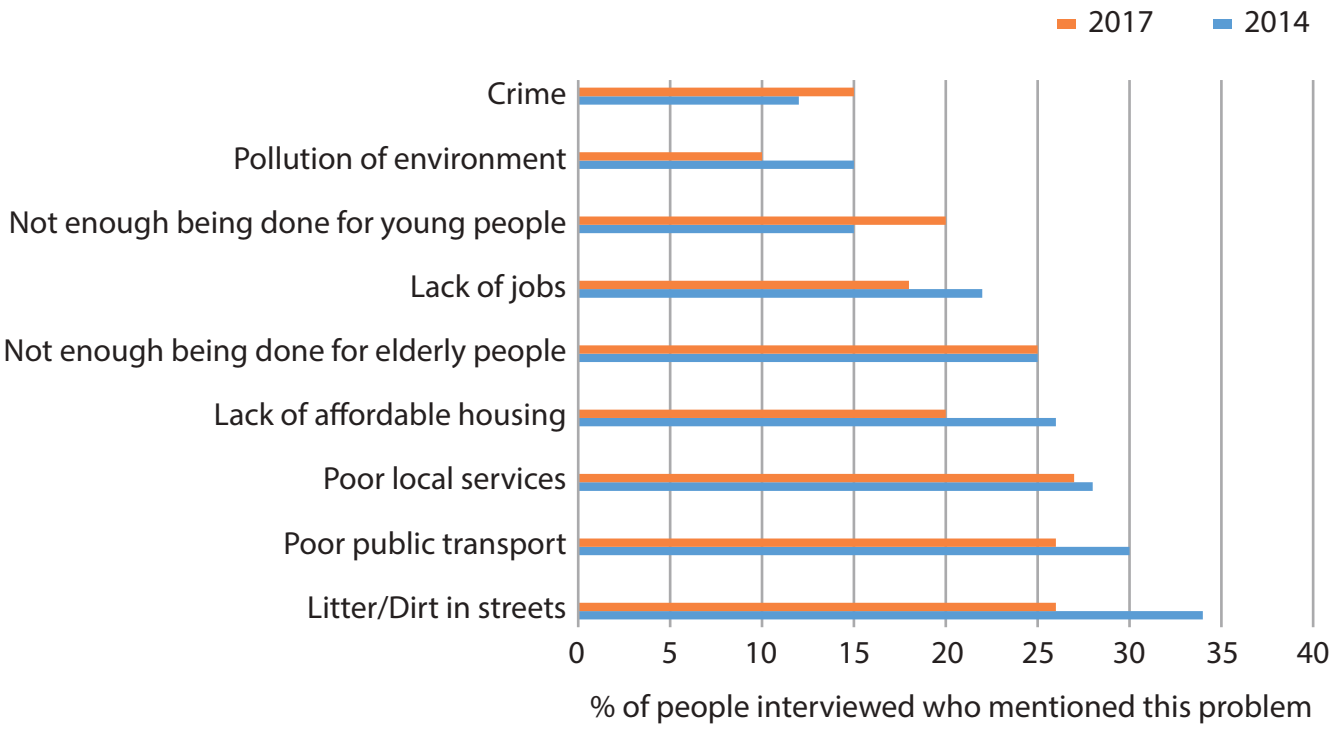


Figure 11

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The students concluded that the social, economic and environmental conditions in the rural area had improved since 2014.

Assess the evidence for this conclusion.

(8)

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Mark Scheme (Results)

Summer 2019

Pearson Edexcel GCSE
In Geography Spec B (1GB0) Paper 02

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Paper 2 Mark Scheme

Question	Answer	Marks
1(a)	**C** – Sea-level rise	(1)

Question	Answer	Marks
1(b)	**A** – Freeze-thaw	(1)

Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate impact of glaciation and a second mark for making the correct explanatory link to the impact on landscape. Creation of (U-shaped) valleys/cirques or any other glacial or fluvioglacial feature (1) from glaciers in upland areas eroding pre-existing landscapes (1)  Creation of depositional landforms/landscapes such as drumlin fields/till plains or any other glacial or fluvioglacial features (1) from depositional processes such as ablation (1) Accept moulding of the landscape. Breaking up of the landscape/wearing Reward creation of valley, even if refer to V shape valley **Accept any other appropriate response**	(2) (1+1)

Question	Answer	Marks
2 (a) (i)	A destructive wave or appropriate synonym of same (1)	(1)

Question	Answer	Marks
2 (a) (ii	A – a long fetch across the Atlantic Ocean All other answers are clearly wrong	(1)

Question	Answer	Marks
2(b)	Climate change may increase storminess (1) because of larger areas of warm water generating more energy in the atmosphere and so more storms (1) More hurricane generation because of higher tropical temperatures (1) which will create more temperate storms affecting the UK (1) Accept make 'makes sea hotter; Climate increases – implicit climate change **Accept any other appropriate response**	(2) (1+1)

Question	Answer	Marks
2(c)	Award one mark for the difference as in; headlands and bays on discordant, absent on concordant or one parallel to geology (concordant) – one quasi-perpendicular to geology (discordant (1) Extensions will vary according to starting point but will include; the form of the coastline – 'straight' or with bays and headlands or equivalent **or** because of different attitude of rocks (1) which will cause differences in rates of erosion/retreat on discordant coasts (1) which will result in bays and/or headlands on discordant coasts (1) unlike concordant coasts which will be more uniform (or related idea) (1) **Accept any other appropriate response**	**(4)** **(1) +** **(1+1+1)**

Question	Answer	Marks
3 (a)	**C** – Meanders All other answers are self-evidently mistaken	**(1)**

Question	Answers	Marks
3 (b)	Award one mark for identifying correct reason and a second for extending that idea to apply it to transport processes. Allow one mark for an 'extension' without a named process. Solution (1) when rock minerals enter the water having been chemically dissolved (1) Suspension (1) when rock particles are small enough and light enough to be carried by moving water (1) Traction/bedload (1) when rock material is rolled along a riverbed in times of high discharge (1) Saltation (1) when material is partially in suspension and partially bedload thus moving in a series of 'jumps' (1) **Accept any other appropriate response**	**(2)** **(1+1)**

Question	Answer	Marks
3(c)	A number of possibilities but note that question is 'landscapes' not river channels, so might include; Upper courses have narrower valleys because discharge is lower (1) and (thus) erosion is less (1) Lower courses have more meandering channels because of higher discharge and (1) more lateral erosion (1) Upper courses are irregular and include rapids/ waterfalls because of lower discharge (1) and so less landscape modification (1) Upper course river channels are different because much less water (1) so less effective at eroding so shallower/narrower (1) Allow 'human' responses as in..... Lower course landscapes are dominated by settlement/agriculture because floodplains are fertile (1) so attractive for people and human activity (1) The command word is 'Explain..' – there is no reward for description however detailed. Accept any other appropriate response	**(4)** **(1+1) + (1+1)**

Question	Indicative content
4	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Metamorphic and igneous rocks are generally more resistant to erosion and reflect past volcanic activity • So form higher ground with mountainous areas in much of Scotland and North Wales as a result • Higher ground more likely to be moorland with imposing landscapes and much surface rock/scree • Lochs formed from over-deepened valleys in Scotland • Lowland areas will be dominated by farmland and less imposing landscapes • Lowland areas often covered with superficial deposits such as alluvium • Geology one of several factors contributing to landscape development – other factors being climate, glaciation, human settlement **AO4 (4 marks)** • Areas of metamorphic and igneous rocks are often higher ground • In some areas there is a very close correspondence – especially in Scotland • But not always the case – south west Ireland – the Pennines in England • The other areas are (obviously) sedimentary rocks • These areas are mostly lowland areas, but they vary as in south east England • Coastline more complex in areas of igneous/metamorphic rocks **Remember that this is assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)(i)	**A** – Northern Ireland There is other appropriate response	**(1)**

Question number	Answer	Marks
5(a)(ii)	Allow one mark for correct answer 42.5% - and second mark for legitimate working 166 out of total 385 of 212+166+13 = 391 so 166/391 x 100 = 42.5%	**(2)** **(1+1)**

Question number	Answer	Marks
5(a) (iii)	Allow one mark for each reason. Cities attracting students (1) Cities attract people because of social/cultural attractions (1) Regeneration of urban places creating jobs for younger people (1) Movement out of older population because of change/dislike of inner-city (1) Different types of employment especially tertiary and quaternary (1) In-migration of (younger) foreign workers (1) **Accept any other appropriate response**	**(2)** **(1 + 1)**

Question number	Answer	Marks
5 (b)	Award one mark for basic reason and a second through an extension which might be an application of that idea. Increase in some sectors e.g. finance and business services (1) because of UK's/London's global role (1) Rise in incomes/borrowing (1) driving higher consumption so more employment in retail/leisure etc (1) Population growing (1) therefore need for services such as Drs/teachers (1) Uneducated/low level skills they have to find tertiary jobs (1) need to specify type of tertiary job, e.g. serving in McDonalds (1) As become more educated/higher education (1), therefore more suited to skilled jobs such as in financial, legal sector etc. (1) Deindustrialisation or decline in primary employment (1) so (statistical) increase in growth of tertiary sectors (1) **Accept any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
6 (a)(i)	**D** = North-east corner of the map	**(1)**

Question number	Answer	Marks
6(a)(ii)	Allow one mark for any reasonable expression of the following idea. Residential use/homes/houses (1)	**(1)**

Question number	Answer	Marks
6 (a)(iii)	Award one mark for identifying a basic reason for variation in building height and a further mark for expansion/application of that idea that clarifies why it varies. Because of different levels of demand for space (1) which makes it profitable to intensify use of space by building upwards (1) Because of costs of land (1) making it more profitable to build upwards to intensify land use (1) Because of planning regulations (1) which allow higher buildings in some places but not others (1) Because of the age of the property (1) old buildings in the centre can	**(2)** **(1+1)**

	be single storey/low compared to newer/modern high-rise buildings (1) **Accept any other appropriate response**	

Question number	Answer	Marks
6 (b)	Award one mark for identifying a basic negative/positive effect and a further mark for expansion/application of that idea Specific detail will depend on chosen UK city but expect... It attracts more people who spend more money or more inward investment (1) because of the improved physical/built environment (1) Increase in income generated (1) because area attracts more people locals/tourist/shoppers (1) Attracts potential employees (1) because of improved employment opportunities/businesses (1) Increased attraction for both locals and tourists (1) so improved employment opportunities/businesses (1) Many people are displaced (1) because of lack of availability of affordable housing (1) Extra loading on buses/trains etc/traffic jams (1) because of economic growth/population growth (1) **Accept any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
6(c)	Award one mark for outlining/explaining a basic change and then up to three further marks for expansion/application of the reason for that change. Specific detail will depend on chosen UK city but expect... More ethnic diversity (1) with the emergence of distinctive areas in the city e.g. Brick Lane in London (1) leading to more/less tensions between communities and/or similar extension of broader impact (1) more cultural mixing with availability of different foods/fashions etc (1) Changing age structure (1) because of younger age profile of in-migrants (1) increase in total population size (1) which in turn will change the rates of natural increase (1) which can invigorate the local economy in previously run-down areas (1). Allow up to 1 mark for any detail/data drawn from the case-study to support a point. Accept any other appropriate response	**(4)**

Question	Indicative content
7	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Basic cause is likely to be both variety and number of jobs • Obviously smaller places have fewer long-term possibilities • Likely that significant numbers of graduates of larger universities in larger cities are natives of those cities so they stay at home faster graduation • Some of the top 5 are in quite remote locations or, conversely close to London (e.g. Reading) • London likely to be the big 'winner' in this thus reinforcing its dominance in the UK economy – keeping 120 000 graduates each year! • Making it more attractive in long-term • Many London students actually live in London: and go to university in London • Large cities in the context of their area London, Birmingham, Belfast **AO4 (4 marks)** • Bottom 5 universities all located in larger places than Top 5 universities • Larger universities located in larger cities • These retain a higher % of their graduates • This relationship not perfect • London far better graduate retention than any other – 15% better than next best (Manchester) • Worst at retention (Exeter) in smallest town/city (117,000) **Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)

Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Typical answers will either focus on more than one beach /coastal characteristic and how they relate, or one beach/coastal characteristic and how they vary between different locations and/or at different sites in one location. Accept reference to coastal defences as could be at the back of the beach and topic focus in on coastal management. Is there a relationship between rock type (1) and the range of beach gradients found at both locations (1) Do differences in the aspect of the beach affect its morphology (1) because of different wave energy environment? (1) Do differences in coastal management at the two locations(1) affect beach morphology/gradient/sediment size? (1) The coarser the beach material (1) the steeper the gradient (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
8 (a) (ii)	Award one mark for identifying a legitimate problem and a further mark for applying it these locations and these sites, as opposed to others. Only Location A appears to be managed (although some of Location B out of view) (1) so no contrast possible (1) Access appears difficult at Location B (1) so health and safety issue (1) Waves appear to be powerful at Location B (1) so health and safety issue (1) Beach materials include large boulders (1) which might make results unreliable (1) Allow answers that focus on the 'problems' that might arise from the lack of reliability of the data as in; The beach at location A may have had beach renourishment (1) which makes the data unreliable (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
8 (a) (iii)	Award one mark for identifying a reasonable use of OS maps and a second for how it might help choose location/sites. **Locations** Distance to place can be worked out (1) which helps plan the day (1) Some maps (1:25000) will show beach management e.g. groynes (1) which helps develop the idea of contrast (1) Establish whether the beach is accessible by public rights of way (1) which will help manage safety and timings (1) Locations of different beaches – overview (1) length of the beach so that able to get 3 profiles for measurement (1) **Sites** Distances on the beach can be worked out (1) to allow a systematic sample to be carried out (1) Sites can be chosen to reflect different aspects of the beach (1) such as aspect, length and sediment (1) **Limit to three marks if only one of locations or sites addressed** **Allow any other appropriate response**	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

Question Number	Indicative content
8 (b)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Reference should be made to the results of data collection in terms of specific locations and the relationship with management of coastal communities. • Conclusions reached should be clear with references to potential for error. • Assessment should include a clear distinction between accuracy and reliability. • Accuracy might be explored through the quality of equipment used. • Accuracy might be explored through and the care taken by the students. • Reliability might be explored in terms of how typical the day was when primary data was collected. • Reliability might be explored through the quality of sampling in the selection of sites • Reliability might be considered in terms of the age of the secondary data. **AO4** • Should include references to primary data gathered, focussing on work on beaches to measure beach morphology. • Should include references to primary data gathered, focussing on beach sediment. • Should include references to the use of geology maps as part of secondary data. • Might include coastal management plans mostly derived from ICZM plans downloaded from the internet. • Might include maps, present and past to show changes in the coastal environment. • Might include meteorological data to examine trends in storm events. • Might include local plans including local land-use zoning which suggest priorities for coastal protection. • Might include local and national news sources covering historic events which impact on current policies. • Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making. **Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)

		w aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a)(i)	Typical answers will either focus on more than one river /drainage basin characteristic and how they relate, or one river/drainage basin characteristic and how they vary between different locations and/or at different sites in one location. Is there a relationship between rock type (1) and the gradients found at both locations (1) Does channel width and depth (1) increase downstream both between sites and locations (1) Is bankfull capacity different (1) so affecting flood risk (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
9 (a) (ii)	Award one mark for identifying a legitimate problem and a further mark for applying it these locations and these sites, as opposed to others. Neither location appears to be managed (1) so no contrast possible (1) Streams appear very similar (1) so no contrast possible (1) Access appears difficult (1) so health and safety issue (1) River appears to be powerful (1) so health and safety issue (1) Stream bed looks chaotic/varied (1) which might make results unreliable (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
9 (a) (iii)	Award one mark for identifying a reasonable use of OS maps and a second for how it might help choose location/sites. **Locations** Distance to place can be worked out (1) which helps plan the day (1) Some maps (1:25000) will show river management e.g. channelisation (1) which helps develop the idea of contrast (1) Establish whether the stream is accessible by public rights of way (1) which will help manage safety and timings (1) **Sites** Width of the stream can be worked out (1) to allow a systematic sample to be carried out (1)	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

	Sites can be chosen to reflect different aspects of the stream (1) such as width, depth and gradient (1) **Limit to three marks if only one of locations or sites addressed** **Allow any other appropriate response**	

<table>
<tr><th colspan="2">Question Number</th><th>Indicative content</th></tr>
<tr><td colspan="2">9 (b)</td><td>AO3 (4 marks) / AO4 (4 marks)

AO3
• Reference should be made to the results of data collection in terms of specific locations and the relationship with flood risk.
• Conclusions reached should be clear with references to potential for error.
• Assessment should include a clear distinction between accuracy and reliability.
• Accuracy might be explored through the quality of equipment used.
• Accuracy might be explored through and the care taken by the students.
• Reliability might be explored in terms of how typical the day was when primary data was collected.
• Reliability might be explored through the quality of sampling in the selection of sites
• Reliability might be considered in terms of the age of the secondary data.

AO4
• Should include references to primary data gathered focussing on changes in river channel characteristics
• Should include references to primary data gathered focussing on factors that might influence flood risk
• Should include Environment Agency flood risk maps.
• Might include past maps to show changes in the local environment especially building on the flood plain
• Might include meteorological data to examine trends in storm events.
• Might include local plans including local land-use zoning which suggest priorities for flood protection.
• Might include local and national news sources covering historic events which impact on current policies.
• Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making.

Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.</td></tr>
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<tr><td></td><td>0</td><td>No rewardable material.</td></tr>
<tr><td>Level 1</td><td>1–3</td><td>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
• Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited</td></tr>
</table>

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
10 (a)	Award one mark for identifying a legitimate method of quantitative data collection and a further mark for developing that idea. Use of a (bipolar) environmental survey (1) measuring various aspects of the built environment in contrasting areas (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
10 (b)	Award one mark each for following; Diagram gives clear indication of **type** of data gathered e.g building height (1) Diagram has clear indication of the results e.g. numbers and/or locations showing differences form place to place/time to time (1), **Thus 2 marks for the labelled diagram (without annotations)** Annotations provide a basic explanation of the results (1) a second and/or developed explanation e.g. Building height is a reflection of location and/or cost of land. (1) **If no diagram is presented no marks can be awarded.** **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
10 (c)	Award one mark for basic point and further mark(s) for the development of that point. Depends on data collected but expect. Do not expect distinction between reliability and accuracy. Better equipment (1) detail of the same (1) More data collected (1) to improve sample size (1) More care in site selection (1) to give greater range (1) More visits to site (1) to improve number of responses/data collected (1) Visits at different times (1) to allow for variance on populations/environments so improve reliability (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

<table>
<tr><th colspan="2">Question Number</th><th>Indicative content</th></tr>
<tr><td colspan="2">10 (d)</td><td>AO3 (4 marks) / AO4 (4 marks)

AO3

• The evidence is partial based of 30 questionnaires from an unknown total population.
• 30 ‘sampled’ are very unlikely to be representative – Thursday afternoon might be an issue.
• ‘Randomly selected residents’ may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations.
• No explanation of the 13/10/7 division.
• This is a perception study and, as such, may not accurately reflect the reality of either of these environments.
• Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study.

AO4

• The results are not totally transparent.
• When aggregated these are the two most important responses.
• However, they are not the most important reasons for all groups.
• For ‘city centre’ dwellers it is proximity to leisure which dominates followed by transport, for the urban fringes it is proximity to countryside but closeness to family is in 2nd spot.
• For the suburbanites these are indeed the top two categories.
• However, suburbanites have much more mixed results – less polarised than other two categories.
• So general conclusion would be that the results are mixed.

Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.

Some candidates tend to explain why people have responded this way rather than assess the quality of the evidence for these conclusions – this is not creditable.</td></tr>
<tr><td>Level</td><td>Mark</td><td>Descriptor</td></tr>
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<tr><td>Level 1</td><td>1–3</td><td>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
• Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited</td></tr>
</table>

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	Award one mark for identifying a legitimate method of quantitative data collection and a further mark for developing that idea. Use of a (bipolar) environmental survey (1) measuring various aspects of the built environment in contrasting areas. (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
11 (b)	Award one mark each for following; Diagram gives clear indication of **type** of data gathered e.g number of services (1) Diagram has clear indication of the results e.g. numbers and/or locations showing differences from place to place/time to time (1), **Thus 2 marks for the labelled diagram (without annotations)** Annotations provide a basic explanation of the results (1) + a second and/or developed explanation e.g. bigger villages had more services because there was more demand (1) **If no diagram is presented no marks can be awarded.** **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
11 (c)	Award one mark for basic point and further mark(s) for the development of that point. Depends on data collected but expect. Do not expect distinction between reliability and accuracy. Better equipment (1) detail of the same (1) More data collected (1) to improve sample size (1) More care in site selection (1) to give greater range (1) More visits to site (1) to improve number of responses/data collected (1) Visits at different times (1) to allow for variance on populations/environments so improve reliability (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

Question Number		Indicative content
11 (d)		**AO3 (4 marks) / AO4 (4 marks)** **AO3** • The evidence is partial based of 30 questionnaires from an unknown total population. • 30 'sampled' are very unlikely to be representative – Thursday afternoon might be an issue. • 'Randomly selected residents' may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations. • No explanation of the 13/10/7 division. • This is a perception study and, as such, may not accurately reflect the reality of either of these environments. • Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study. **AO4** • The results are not totally transparent. • When aggregated these are the two most important responses. • However, they are not the most important reasons for all groups. • For 'Village A' residents it is proximity to leisure which dominates followed by transport, for the Village C residents it is proximity to countryside but closeness to family is in 2nd spot. • For the Village B residents these are indeed the top two categories. • However, Village B residents have much more mixed results – less polarised than other two categories. • So general conclusion would be that the results are mixed. **Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.** **Some candidates tend to explain why people have responded this way rather than assess the quality of the evidence for these conclusions – this is not creditable.**
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)

		• Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

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Mark Scheme (Results)

Summer 2019

Pearson Edexcel GCSE
In Geography Spec B (1GB0) Paper 02

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Paper 2 Mark Scheme

Question	Answer	Marks
1(a)	**C** – Sea-level rise	(1)

Question	Answer	Marks
1(b)	**A** – Freeze-thaw	(1)

Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate impact of glaciation and a second mark for making the correct explanatory link to the impact on landscape. Creation of (U-shaped) valleys/cirques or any other glacial or fluvioglacial feature (1) from glaciers in upland areas eroding pre-existing landscapes (1)  Creation of depositional landforms/landscapes such as drumlin fields/till plains or any other glacial or fluvioglacial features (1) from depositional processes such as ablation (1) Accept moulding of the landscape. Breaking up of the landscape/wearing Reward creation of valley, even if refer to V shape valley **Accept any other appropriate response**	(2) (1+1)

Question	Answer	Marks
2 (a) (i)	A destructive wave or appropriate synonym of same (1)	(1)

Question	Answer	Marks
2 (a) (ii	A – a long fetch across the Atlantic Ocean All other answers are clearly wrong	(1)

Question	Answer	Marks
2(b)	Climate change may increase storminess (1) because of larger areas of warm water generating more energy in the atmosphere and so more storms (1) More hurricane generation because of higher tropical temperatures (1) which will create more temperate storms affecting the UK (1) Accept make 'makes sea hotter; Climate increases – implicit climate change **Accept any other appropriate response**	(2) (1+1)

Question	Answer	Marks
2(c)	Award one mark for the difference as in; headlands and bays on discordant, absent on concordant or one parallel to geology (concordant) – one quasi-perpendicular to geology (discordant (1) Extensions will vary according to starting point but will include; the form of the coastline – 'straight' or with bays and headlands or equivalent **or** because of different attitude of rocks (1) which will cause differences in rates of erosion/retreat on discordant coasts (1) which will result in bays and/or headlands on discordant coasts (1) unlike concordant coasts which will be more uniform (or related idea) (1) **Accept any other appropriate response**	**(4)** **(1) +** **(1+1+1)**

Question	Answer	Marks
3 (a)	**C** – Meanders All other answers are self-evidently mistaken	**(1)**

Question	Answers	Marks
3 (b)	Award one mark for identifying correct reason and a second for extending that idea to apply it to transport processes. Allow one mark for an 'extension' without a named process. Solution (1) when rock minerals enter the water having been chemically dissolved (1) Suspension (1) when rock particles are small enough and light enough to be carried by moving water (1) Traction/bedload (1) when rock material is rolled along a riverbed in times of high discharge (1) Saltation (1) when material is partially in suspension and partially bedload thus moving in a series of 'jumps' (1) **Accept any other appropriate response**	**(2)** **(1+1)**

Question	Answer	Marks
3(c)	A number of possibilities but note that question is 'landscapes' not river channels, so might include; Upper courses have narrower valleys because discharge is lower (1) and (thus) erosion is less (1) Lower courses have more meandering channels because of higher discharge and (1) more lateral erosion (1) Upper courses are irregular and include rapids/ waterfalls because of lower discharge (1) and so less landscape modification (1) Upper course river channels are different because much less water (1) so less effective at eroding so shallower/narrower (1) Allow 'human' responses as in..... Lower course landscapes are dominated by settlement/agriculture because floodplains are fertile (1) so attractive for people and human activity (1) The command word is 'Explain..' – there is no reward for description however detailed. Accept any other appropriate response	**(4)** **(1+1) + (1+1)**

Question	Indicative content
4	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Metamorphic and igneous rocks are generally more resistant to erosion and reflect past volcanic activity • So form higher ground with mountainous areas in much of Scotland and North Wales as a result • Higher ground more likely to be moorland with imposing landscapes and much surface rock/scree • Lochs formed from over-deepened valleys in Scotland • Lowland areas will be dominated by farmland and less imposing landscapes • Lowland areas often covered with superficial deposits such as alluvium • Geology one of several factors contributing to landscape development – other factors being climate, glaciation, human settlement **AO4 (4 marks)** • Areas of metamorphic and igneous rocks are often higher ground • In some areas there is a very close correspondence – especially in Scotland • But not always the case – south west Ireland – the Pennines in England • The other areas are (obviously) sedimentary rocks • These areas are mostly lowland areas, but they vary as in south east England • Coastline more complex in areas of igneous/metamorphic rocks **Remember that this is assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)(i)	**A** – Northern Ireland There is other appropriate response	**(1)**

Question number	Answer	Marks
5(a)(ii)	Allow one mark for correct answer 42.5% - and second mark for legitimate working 166 out of total 385 of 212+166+13 = 391 so 166/391 x 100 = 42.5%	**(2)** **(1+1)**

Question number	Answer	Marks
5(a) (iii)	Allow one mark for each reason. Cities attracting students (1) Cities attract people because of social/cultural attractions (1) Regeneration of urban places creating jobs for younger people (1) Movement out of older population because of change/dislike of inner-city (1) Different types of employment especially tertiary and quaternary (1) In-migration of (younger) foreign workers (1) **Accept any other appropriate response**	**(2)** **(1 + 1)**

Question number	Answer	Marks
5 (b)	Award one mark for basic reason and a second through an extension which might be an application of that idea. Increase in some sectors e.g. finance and business services (1) because of UK's/London's global role (1) Rise in incomes/borrowing (1) driving higher consumption so more employment in retail/leisure etc (1) Population growing (1) therefore need for services such as Drs/teachers (1) Uneducated/low level skills they have to find tertiary jobs (1) need to specify type of tertiary job, e.g. serving in McDonalds (1) As become more educated/higher education (1), therefore more suited to skilled jobs such as in financial, legal sector etc. (1) Deindustrialisation or decline in primary employment (1) so (statistical) increase in growth of tertiary sectors (1) **Accept any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
6 (a)(i)	**D** = North-east corner of the map	**(1)**

Question number	Answer	Marks
6(a)(ii)	Allow one mark for any reasonable expression of the following idea. Residential use/homes/houses (1)	**(1)**

Question number	Answer	Marks
6 (a)(iii)	Award one mark for identifying a basic reason for variation in building height and a further mark for expansion/application of that idea that clarifies why it varies. Because of different levels of demand for space (1) which makes it profitable to intensify use of space by building upwards (1) Because of costs of land (1) making it more profitable to build upwards to intensify land use (1) Because of planning regulations (1) which allow higher buildings in some places but not others (1) Because of the age of the property (1) old buildings in the centre can	**(2)** **(1+1)**

	be single storey/low compared to newer/modern high-rise buildings (1) **Accept any other appropriate response**	

Question number	Answer	Marks
6 (b)	Award one mark for identifying a basic negative/positive effect and a further mark for expansion/application of that idea Specific detail will depend on chosen UK city but expect... It attracts more people who spend more money or more inward investment (1) because of the improved physical/built environment (1) Increase in income generated (1) because area attracts more people locals/tourist/shoppers (1) Attracts potential employees (1) because of improved employment opportunities/businesses (1) Increased attraction for both locals and tourists (1) so improved employment opportunities/businesses (1) Many people are displaced (1) because of lack of availability of affordable housing (1) Extra loading on buses/trains etc/traffic jams (1) because of economic growth/population growth (1) **Accept any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
6(c)	Award one mark for outlining/explaining a basic change and then up to three further marks for expansion/application of the reason for that change. Specific detail will depend on chosen UK city but expect... More ethnic diversity (1) with the emergence of distinctive areas in the city e.g. Brick Lane in London (1) leading to more/less tensions between communities and/or similar extension of broader impact (1) more cultural mixing with availability of different foods/fashions etc (1) Changing age structure (1) because of younger age profile of in-migrants (1) increase in total population size (1) which in turn will change the rates of natural increase (1) which can invigorate the local economy in previously run-down areas (1). Allow up to 1 mark for any detail/data drawn from the case-study to support a point. Accept any other appropriate response	**(4)**

Question	Indicative content
7	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Basic cause is likely to be both variety and number of jobs • Obviously smaller places have fewer long-term possibilities • Likely that significant numbers of graduates of larger universities in larger cities are natives of those cities so they stay at home faster graduation • Some of the top 5 are in quite remote locations or, conversely close to London (e.g. Reading) • London likely to be the big 'winner' in this thus reinforcing its dominance in the UK economy – keeping 120 000 graduates each year! • Making it more attractive in long-term • Many London students actually live in London: and go to university in London • Large cities in the context of their area London, Birmingham, Belfast **AO4 (4 marks)** • Bottom 5 universities all located in larger places than Top 5 universities • Larger universities located in larger cities • These retain a higher % of their graduates • This relationship not perfect • London far better graduate retention than any other – 15% better than next best (Manchester) • Worst at retention (Exeter) in smallest town/city (117,000) **Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)

Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Typical answers will either focus on more than one beach /coastal characteristic and how they relate, or one beach/coastal characteristic and how they vary between different locations and/or at different sites in one location. Accept reference to coastal defences as could be at the back of the beach and topic focus in on coastal management. Is there a relationship between rock type (1) and the range of beach gradients found at both locations (1) Do differences in the aspect of the beach affect its morphology (1) because of different wave energy environment? (1) Do differences in coastal management at the two locations(1) affect beach morphology/gradient/sediment size? (1) The coarser the beach material (1) the steeper the gradient (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
8 (a) (ii)	Award one mark for identifying a legitimate problem and a further mark for applying it these locations and these sites, as opposed to others. Only Location A appears to be managed (although some of Location B out of view) (1) so no contrast possible (1) Access appears difficult at Location B (1) so health and safety issue (1) Waves appear to be powerful at Location B (1) so health and safety issue (1) Beach materials include large boulders (1) which might make results unreliable (1) Allow answers that focus on the 'problems' that might arise from the lack of reliability of the data as in; The beach at location A may have had beach renourishment (1) which makes the data unreliable (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
8 (a) (iii)	Award one mark for identifying a reasonable use of OS maps and a second for how it might help choose location/sites. **Locations** Distance to place can be worked out (1) which helps plan the day (1) Some maps (1:25000) will show beach management e.g. groynes (1) which helps develop the idea of contrast (1) Establish whether the beach is accessible by public rights of way (1) which will help manage safety and timings (1) Locations of different beaches – overview (1) length of the beach so that able to get 3 profiles for measurement (1) **Sites** Distances on the beach can be worked out (1) to allow a systematic sample to be carried out (1) Sites can be chosen to reflect different aspects of the beach (1) such as aspect, length and sediment (1) **Limit to three marks if only one of locations or sites addressed** **Allow any other appropriate response**	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

Question Number	Indicative content
8 (b)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Reference should be made to the results of data collection in terms of specific locations and the relationship with management of coastal communities. • Conclusions reached should be clear with references to potential for error. • Assessment should include a clear distinction between accuracy and reliability. • Accuracy might be explored through the quality of equipment used. • Accuracy might be explored through and the care taken by the students. • Reliability might be explored in terms of how typical the day was when primary data was collected. • Reliability might be explored through the quality of sampling in the selection of sites • Reliability might be considered in terms of the age of the secondary data. **AO4** • Should include references to primary data gathered, focussing on work on beaches to measure beach morphology. • Should include references to primary data gathered, focussing on beach sediment. • Should include references to the use of geology maps as part of secondary data. • Might include coastal management plans mostly derived from ICZM plans downloaded from the internet. • Might include maps, present and past to show changes in the coastal environment. • Might include meteorological data to examine trends in storm events. • Might include local plans including local land-use zoning which suggest priorities for coastal protection. • Might include local and national news sources covering historic events which impact on current policies. • Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making. **Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)

		w aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a)(i)	Typical answers will either focus on more than one river /drainage basin characteristic and how they relate, or one river/drainage basin characteristic and how they vary between different locations and/or at different sites in one location. Is there a relationship between rock type (1) and the gradients found at both locations (1) Does channel width and depth (1) increase downstream both between sites and locations (1) Is bankfull capacity different (1) so affecting flood risk (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
9 (a) (ii)	Award one mark for identifying a legitimate problem and a further mark for applying it these locations and these sites, as opposed to others. Neither location appears to be managed (1) so no contrast possible (1) Streams appear very similar (1) so no contrast possible (1) Access appears difficult (1) so health and safety issue (1) River appears to be powerful (1) so health and safety issue (1) Stream bed looks chaotic/varied (1) which might make results unreliable (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
9 (a) (iii)	Award one mark for identifying a reasonable use of OS maps and a second for how it might help choose location/sites. **Locations** Distance to place can be worked out (1) which helps plan the day (1) Some maps (1:25000) will show river management e.g. channelisation (1) which helps develop the idea of contrast (1) Establish whether the stream is accessible by public rights of way (1) which will help manage safety and timings (1) **Sites** Width of the stream can be worked out (1) to allow a systematic sample to be carried out (1)	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

	Sites can be chosen to reflect different aspects of the stream (1) such as width, depth and gradient (1) **Limit to three marks if only one of locations or sites addressed** **Allow any other appropriate response**	

<table>
<tr><th colspan="2">Question Number</th><th>Indicative content</th></tr>
<tr><td colspan="2">9 (b)</td><td>AO3 (4 marks) / AO4 (4 marks)

AO3
• Reference should be made to the results of data collection in terms of specific locations and the relationship with flood risk.
• Conclusions reached should be clear with references to potential for error.
• Assessment should include a clear distinction between accuracy and reliability.
• Accuracy might be explored through the quality of equipment used.
• Accuracy might be explored through and the care taken by the students.
• Reliability might be explored in terms of how typical the day was when primary data was collected.
• Reliability might be explored through the quality of sampling in the selection of sites
• Reliability might be considered in terms of the age of the secondary data.

AO4
• Should include references to primary data gathered focussing on changes in river channel characteristics
• Should include references to primary data gathered focussing on factors that might influence flood risk
• Should include Environment Agency flood risk maps.
• Might include past maps to show changes in the local environment especially building on the flood plain
• Might include meteorological data to examine trends in storm events.
• Might include local plans including local land-use zoning which suggest priorities for flood protection.
• Might include local and national news sources covering historic events which impact on current policies.
• Might include use of websites to derive property values (e.g. Zoopla) which will impact on current decision making.

Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.</td></tr>
<tr><td>Level</td><td>Mark</td><td>Descriptor</td></tr>
<tr><td></td><td>0</td><td>No rewardable material.</td></tr>
<tr><td>Level 1</td><td>1–3</td><td>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
• Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited</td></tr>
</table>

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
10 (a)	Award one mark for identifying a legitimate method of quantitative data collection and a further mark for developing that idea. Use of a (bipolar) environmental survey (1) measuring various aspects of the built environment in contrasting areas (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
10 (b)	Award one mark each for following; Diagram gives clear indication of **type** of data gathered e.g building height (1) Diagram has clear indication of the results e.g. numbers and/or locations showing differences form place to place/time to time (1), **Thus 2 marks for the labelled diagram (without annotations)** Annotations provide a basic explanation of the results (1) a second and/or developed explanation e.g. Building height is a reflection of location and/or cost of land. (1) **If no diagram is presented no marks can be awarded.** **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
10 (c)	Award one mark for basic point and further mark(s) for the development of that point. Depends on data collected but expect. Do not expect distinction between reliability and accuracy. Better equipment (1) detail of the same (1) More data collected (1) to improve sample size (1) More care in site selection (1) to give greater range (1) More visits to site (1) to improve number of responses/data collected (1) Visits at different times (1) to allow for variance on populations/environments so improve reliability (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

<table>
<tr><th colspan="2">Question Number</th><th>Indicative content</th></tr>
<tr><td colspan="2">10 (d)</td><td>AO3 (4 marks) / AO4 (4 marks)

AO3

• The evidence is partial based of 30 questionnaires from an unknown total population.
• 30 ‘sampled’ are very unlikely to be representative – Thursday afternoon might be an issue.
• ‘Randomly selected residents’ may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations.
• No explanation of the 13/10/7 division.
• This is a perception study and, as such, may not accurately reflect the reality of either of these environments.
• Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study.

AO4

• The results are not totally transparent.
• When aggregated these are the two most important responses.
• However, they are not the most important reasons for all groups.
• For ‘city centre’ dwellers it is proximity to leisure which dominates followed by transport, for the urban fringes it is proximity to countryside but closeness to family is in 2nd spot.
• For the suburbanites these are indeed the top two categories.
• However, suburbanites have much more mixed results – less polarised than other two categories.
• So general conclusion would be that the results are mixed.

Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.

Some candidates tend to explain why people have responded this way rather than assess the quality of the evidence for these conclusions – this is not creditable.</td></tr>
<tr><td>Level</td><td>Mark</td><td>Descriptor</td></tr>
<tr><td></td><td>0</td><td>No rewardable material.</td></tr>
<tr><td>Level 1</td><td>1–3</td><td>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
• Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited</td></tr>
</table>

		relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	Award one mark for identifying a legitimate method of quantitative data collection and a further mark for developing that idea. Use of a (bipolar) environmental survey (1) measuring various aspects of the built environment in contrasting areas. (1) **Allow any other appropriate response**	**(2)** **(1+1)**

Question number	Answer	Marks
11 (b)	Award one mark each for following; Diagram gives clear indication of **type** of data gathered e.g number of services (1) Diagram has clear indication of the results e.g. numbers and/or locations showing differences from place to place/time to time (1), **Thus 2 marks for the labelled diagram (without annotations)** Annotations provide a basic explanation of the results (1) + a second and/or developed explanation e.g. bigger villages had more services because there was more demand (1) **If no diagram is presented no marks can be awarded.** **Allow any other appropriate response**	**(4)** **(1+1) + (1+1)**

Question number	Answer	Marks
11 (c)	Award one mark for basic point and further mark(s) for the development of that point. Depends on data collected but expect. Do not expect distinction between reliability and accuracy. Better equipment (1) detail of the same (1) More data collected (1) to improve sample size (1) More care in site selection (1) to give greater range (1) More visits to site (1) to improve number of responses/data collected (1) Visits at different times (1) to allow for variance on populations/environments so improve reliability (1) **Allow any other appropriate response**	**(4)** **(1+1) + (1+1) or** **1 + (1+1+1)**

Question Number		Indicative content
11 (d)		**AO3 (4 marks) / AO4 (4 marks)** **AO3** • The evidence is partial based of 30 questionnaires from an unknown total population. • 30 'sampled' are very unlikely to be representative – Thursday afternoon might be an issue. • 'Randomly selected residents' may not be representative – it is not known whether they are, for example, an accurate reflection of the age-structure or gender structure of these two locations. • No explanation of the 13/10/7 division. • This is a perception study and, as such, may not accurately reflect the reality of either of these environments. • Secondary data might be available to either reinforce or potentially to qualify conclusions drawn from this primary data study. **AO4** • The results are not totally transparent. • When aggregated these are the two most important responses. • However, they are not the most important reasons for all groups. • For 'Village A' residents it is proximity to leisure which dominates followed by transport, for the Village C residents it is proximity to countryside but closeness to family is in 2nd spot. • For the Village B residents these are indeed the top two categories. • However, Village B residents have much more mixed results – less polarised than other two categories. • So general conclusion would be that the results are mixed. **Remember that candidate responses are assessed by levels – please refer to the levels descriptors – the indicative content does not translate into individual marks.** **Some candidates tend to explain why people have responded this way rather than assess the quality of the evidence for these conclusions – this is not creditable.**
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)

		• Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Wednesday 5 June 2019

Afternoon (Time: 1 hour 30 minutes) | Paper Reference **1GB0/02**

Geography B

Paper 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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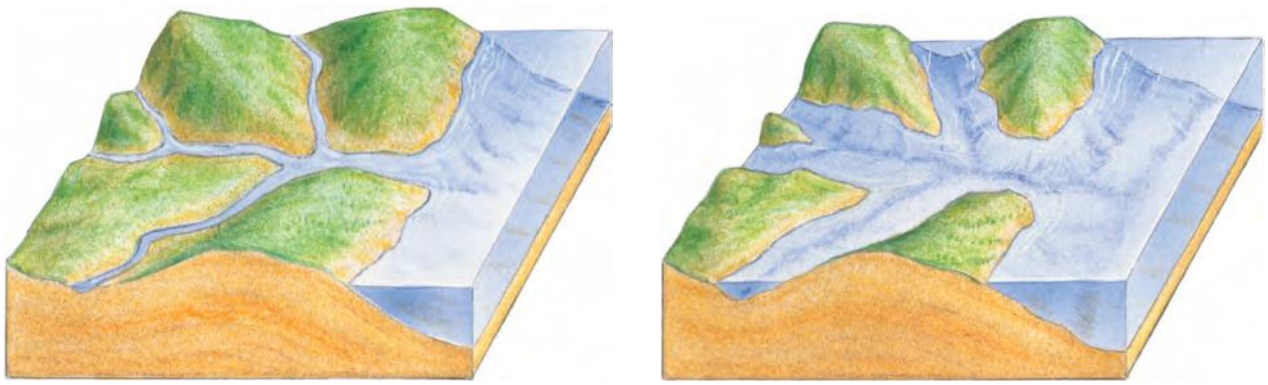
SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1 which is a diagram of changes to a landscape in southern England.



Original landscape

After changes

Figure 1

(a) Identify which **one** of the following is the most likely reason why this landscape has changed.

(1)

- ☒ **A** Weathering
- ☒ **B** Volcanic eruptions
- ☒ **C** Sea-level rise
- ☒ **D** River erosion

(b) Identify which **one** of the following is a weathering process.

(1)

- ☒ **A** Freeze-thaw
- ☒ **B** Abrasion
- ☒ **C** Deposition
- ☒ **D** Slumping

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(c) Explain **one** impact of glaciation on the landscape of the UK.

(2)

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(Total for Question 1 = 4 marks)

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Coastal Change and Conflict

2 (a) Study Figure 2 which shows waves on the coastline of Cornwall.



Figure 2

(i) State the type of waves shown.

(1)

.....

(ii) Identify which **one** of the following is the most likely cause of waves such as these.

(1)

- ☒ **A** a long fetch across the Atlantic Ocean
- ☒ **B** soft rocks that are easily eroded
- ☒ **C** a short fetch across the North Sea
- ☒ **D** a period of very cold weather

(b) Explain **one** reason why there may be an increase in the frequency of storms in the future.

(2)

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(c) Explain the difference between concordant and discordant coastlines. You may use a diagram to help your answer.

(4)

(Total for Question 2 = 8 marks)

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3 Study Figure 3 which is a photograph of the River Severn in Shropshire.



Figure 3

(a) Identify which **one** of the following is the best description of the river landforms shown.

(1)

- ☒ **A** Waterfalls
- ☒ **B** Rapids
- ☒ **C** Meanders
- ☒ **D** Deltas

(b) Explain **one** way in which rivers transport their load.

(2)

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(c) Explain **two** differences between upper course and lower course river landscapes.

(4)

1 .....

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2 .....

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(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 4a and Figure 4b, which show data about the distribution of igneous and metamorphic rocks in the British Isles and its relief.

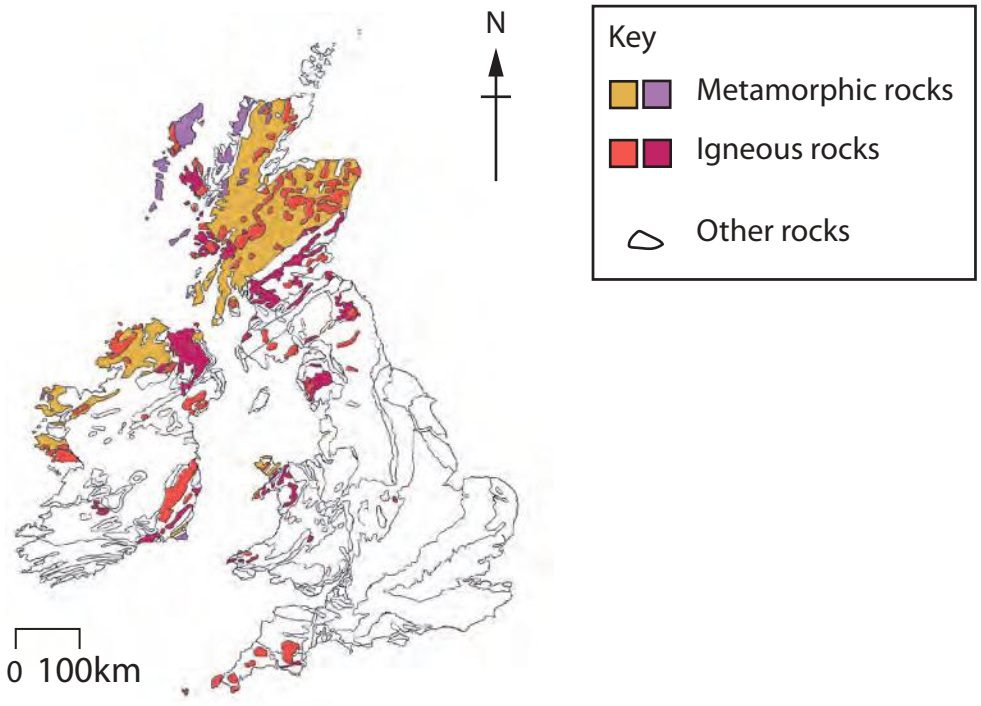


Figure 4a

Figure 4a shows the distribution of igneous and metamorphic rocks in the British Isles.

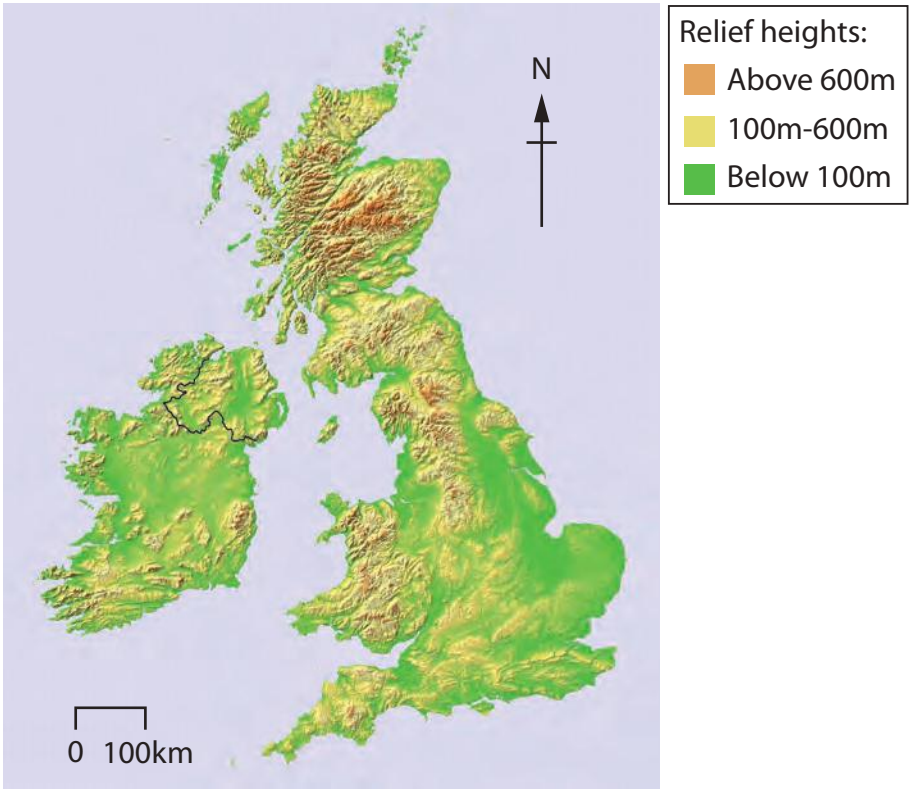


Figure 4b

Figure 4b shows the relief of the British Isles.

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Assess the influence of geology on the landscape of the UK.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions in this section. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 5 which shows which age groups are dominant (in the majority) in different areas of the UK.

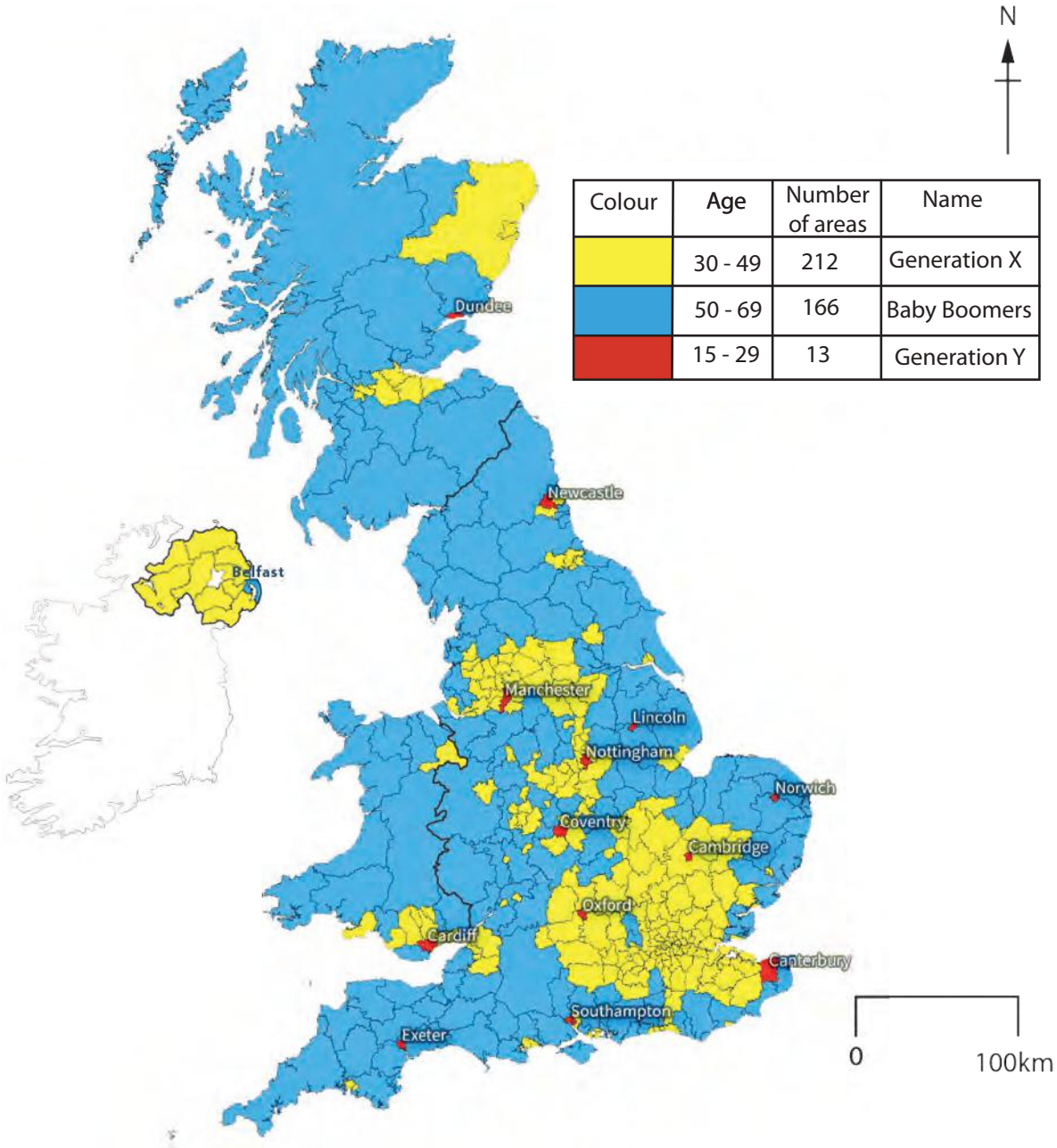


Figure 5

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(i) Identify which **one** of the countries of the UK is dominated by Generation X.

(1)

- ☒ **A** Northern Ireland
- ☒ **B** England
- ☒ **C** Scotland
- ☒ **D** Wales

(ii) Calculate the percentage of areas dominated by 'Baby Boomers'.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

..... %

(iii) State **two** reasons for the distribution of the areas dominated by Generation Y.

(2)

1 .....

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(b) Explain **one** reason for the growth of tertiary employment in the UK.

(2)

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(Total for Question 5 = 7 marks)

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Dynamic UK Cities

6 (a) Study Figure 6 which is a map of a UK city showing building height.



Figure 6

(i) Identify which **one** of the following is most likely to be the location of the city centre.

(1)

- ☒ **A** south-west corner of the map
- ☒ **B** north-west corner of the map
- ☒ **C** centre of the map
- ☒ **D** north-east corner of the map

(ii) Identify the most likely function of buildings which are under 10 metres in height.

(1)

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(iii) Explain **one** reason why building height varies in urban areas.

(2)

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(b) For a UK city that you have studied, explain **one** positive and **one** negative effect of regeneration.

Named UK city .....

(4)

Positive effect

Negative effect

(c) For a named UK city, explain **one** way in which migration has changed its population.

Named UK city .....

(4)

(Total for Question 6 = 12 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be awarded for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 7 which shows information about what happens to graduates at selected UK universities when they complete their studies.

The top 5 universities and bottom 5 universities measured by the percentage of graduates who leave their university town/city after graduation			
Location of university	***% of graduates who leave after graduation***	***Population of town/city***	***Total number of students at university***
Top 5			
Exeter	89%	117,000	23,200
Warrington	87%	202,000	13,600
Coventry	84%	325,000	31,700
Reading	83%	163,000	15,800
Cambridge	82%	158,000	19,900
Bottom 5			
Glasgow	46%	621,000	28,600
Birmingham	44%	1,100,000	34,800
Belfast	42%	333,000	23,800
Manchester	40%	545,000	40,500
London	25%	8,700,000	160,500

Figure 7

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Assess the possible causes and consequences of this movement of graduates.

(8)

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DO NOT WRITE IN THIS AREA

(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided.

If you answer Question 8 put a cross in the box ☒ .

Investigating Coastal Change and Conflict

8 (a) Study Figure 8, which are photographs of the two beaches chosen by a group of students studying the impact of coastal management on coastal processes at two different locations.

- The students chose to measure beaches at two different locations.
- The chosen locations are about 10 km apart with Location A on a south-east facing coastline and Location B on a south-west facing coastline.
- At each location they selected three sites to carry out their beach profiles.
- They intended to measure beach gradient and sediment characteristics.



Location A



Location B

Figure 8

(i) Suggest an enquiry question or hypothesis that the students might have proposed for their investigation.

(2)

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(ii) Suggest **two** problems that the students' choice of locations may have caused for data collection.

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(iii) Explain how the use of Ordnance Survey (OS) maps might have helped the students choose their two beach locations and the three sites on each of those beaches to carry out the profiles.

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(b) You have carried out your own fieldwork investigating how and why coastal management impacts on coastal processes.

Name your coastal fieldwork location:

Assess the accuracy and reliability of the results of your investigation.

(8)

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(Total for Question 8 = 18 marks)

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Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) Study Figure 9, which are photographs of the two access points chosen by a group of students studying river channel changes on a river at two different locations.

- The students chose to measure river channels at two different locations.
- The chosen locations are about 10 km apart with Location A furthest upstream and Location B furthest downstream.
- At each location they selected three sites to carry out their channel measurements.
- They intended to measure channel width and channel depth.



Location A



Location B

Figure 9

(i) Suggest an enquiry question or hypothesis that the students might have proposed for their investigation.

(2)

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(ii) Suggest **two** problems that the students' choice of locations may have caused for data collection.

(4)

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(iii) Explain how the use of Ordnance Survey (OS) maps might have helped the students choose their two river locations and the three sites on each of those rivers to carry out their channel measurements.

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(b) You have carried out your own fieldwork investigating how and why drainage basin characteristics influence flood risk for people and property.

Name your river fieldwork location:

Assess the accuracy and reliability of the results of your investigation.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.

Write your answers in the space provided.

If you answer Question 10 put a cross in the box ☒ .

Investigating Dynamic Urban Areas

10 You have carried out your own fieldwork investigating environmental quality in an urban area.

Name your urban area:

.....

(a) Explain **one** way in which you used quantitative data to measure differences in the environmental quality of your chosen area.

(2)

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(b) Using an annotated diagram that shows **one** way in which you presented the results of your data collection, explain your results.

(4)

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(c) Explain how you would improve your data collection methods to increase their accuracy.

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(d) In 2017 a group of students carried out a questionnaire in three different urban areas, one in the city centre, one in the suburbs and one in a rural settlement just inside the city boundary.

The interviews were conducted between 13:00 and 15:00 on a Thursday afternoon by asking people in the three different areas;

(a) if they were residents in that location and

(b) if they would be prepared to take part in a survey.

The students interviewed 30 residents in total, 13 in the city centre, 10 in the suburb and 7 in the rural settlement just inside the city boundary.

The residents were asked to identify the **three** most important factors for them when they chose their current residence. The results are shown below in Figure 10.

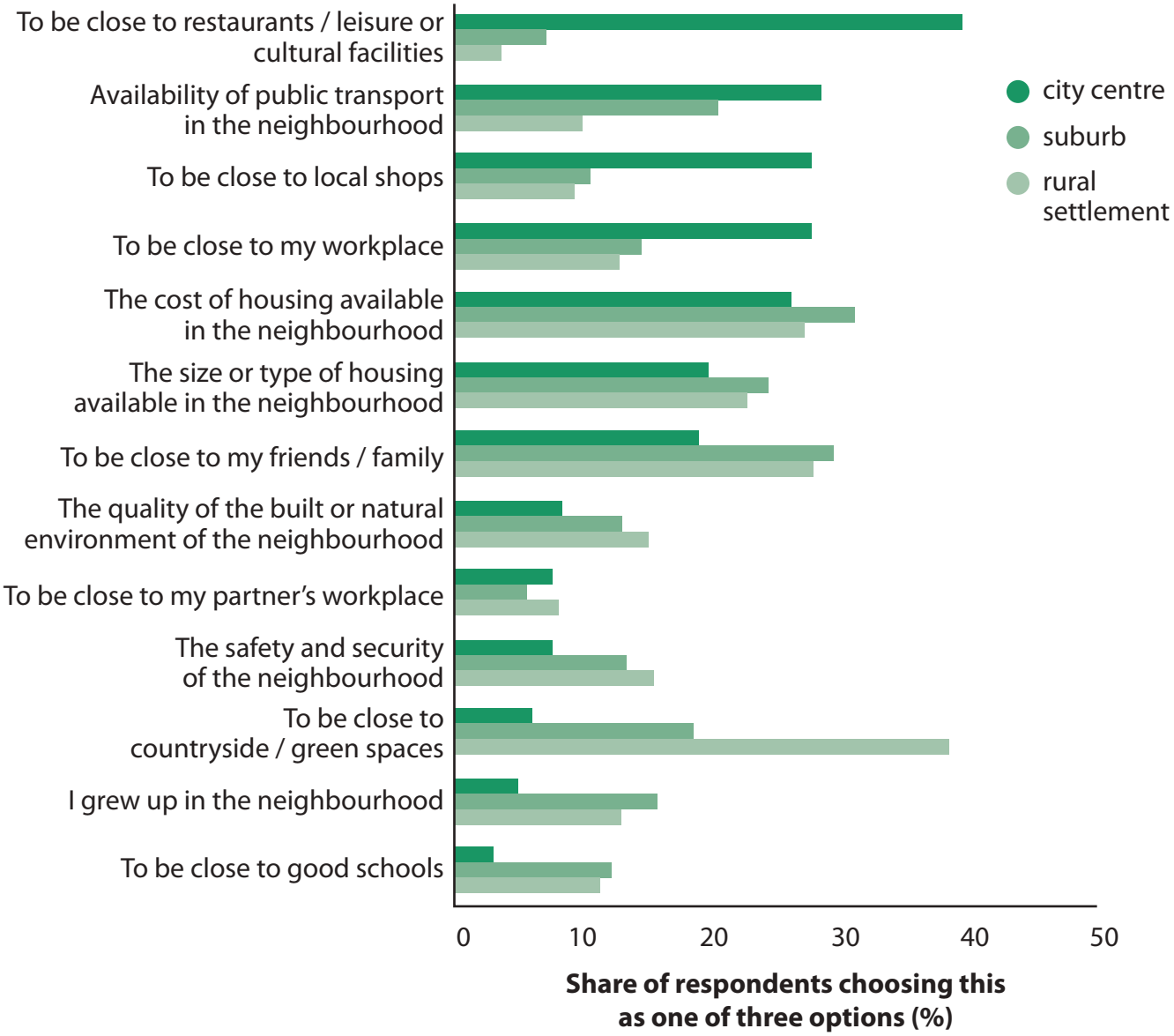


Figure 10

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The students concluded that housing cost and closeness to family and friends were the most important factors overall.

Assess the evidence for this conclusion.

(8)

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(Total for Question 10 = 18 marks)

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Do not answer Question11 if you have already answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 You have carried out your own fieldwork investigating environmental quality in a rural environment.

Name your rural environment:

.....

(a) Explain **one** way in which you used quantitative data to measure differences in the environmental quality of your chosen area.

(2)

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(b) Using an annotated diagram that shows **one** way in which you presented the results of your data collection, explain your results.

(4)

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(c) Explain how you would improve your data collection methods to increase their accuracy.

(4)

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(d) In 2017 a group of students, divided into three groups, carried out a questionnaire in three different villages located 15km (Village A) , 25km (Village B) and 35km (Village C) from the city.

The interviews were conducted between 13:00 and 15:00 on a Thursday afternoon by asking people in the different villages;

(a) if they were residents in that village and

(b) if they would be prepared to take part in a survey.

The students interviewed 30 residents in total, 13 in Village A, 10 in Village B and 7 in Village C.

The interviewees were asked to identify the **three** most important factors to them when they chose their current residence. The results are shown below in Figure 11.

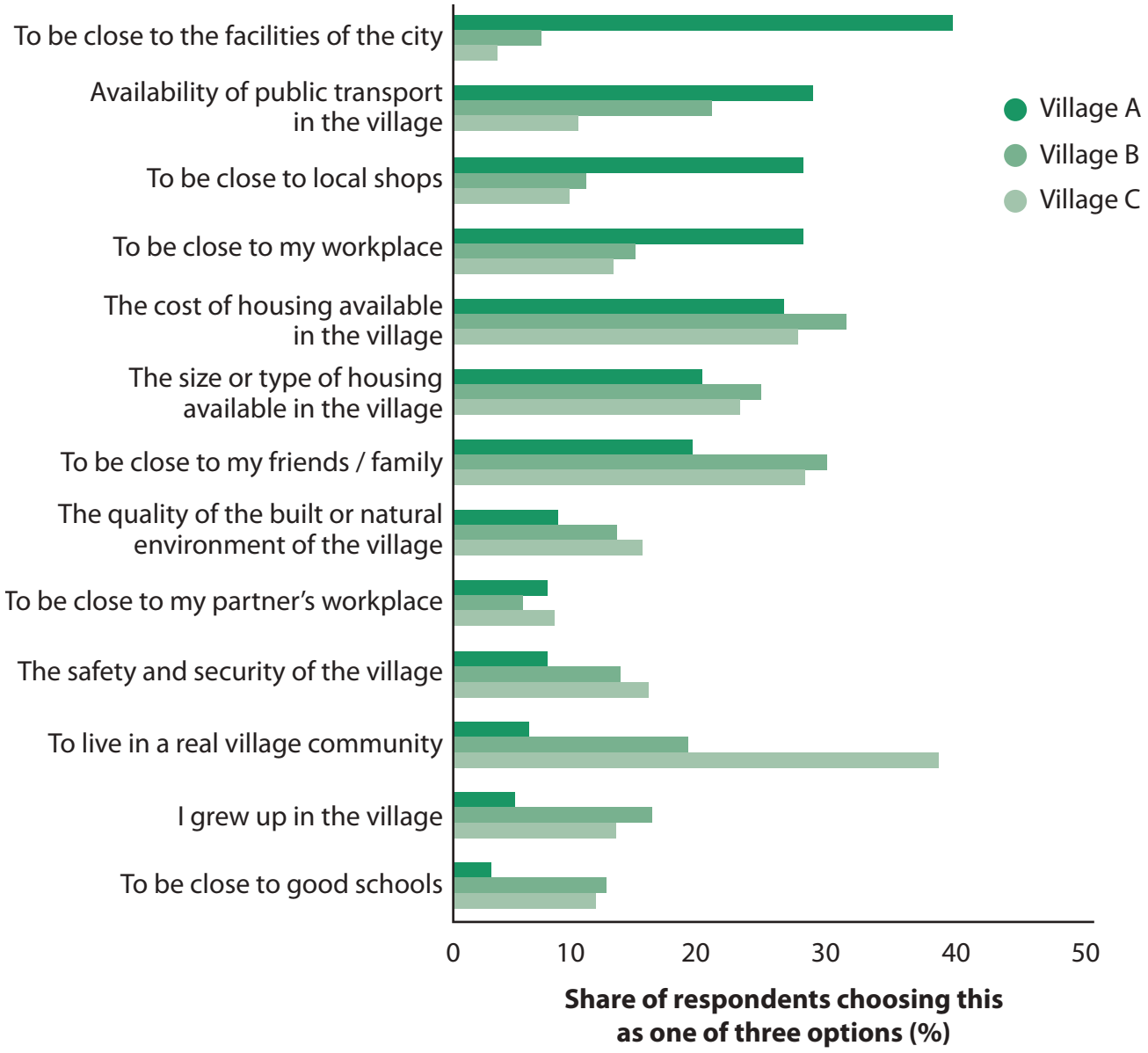


Figure 11

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The students concluded that housing cost and closeness to family and friends were the most important factors overall.

Assess the evidence for this conclusion.

(8)

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Wednesday 5 June 2019

Afternoon (Time: 1 hour 30 minutes) | Paper Reference **1GB0/02**

Geography B

Paper 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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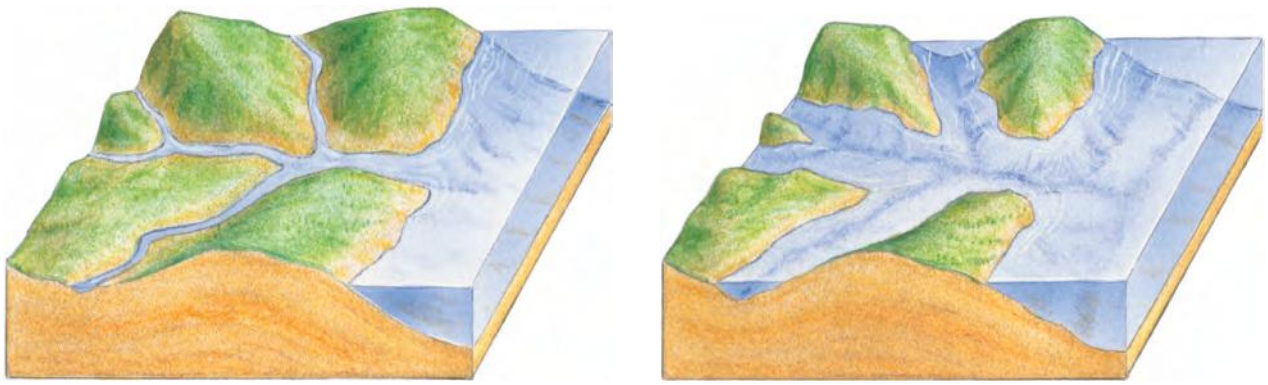
SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1 which is a diagram of changes to a landscape in southern England.



Original landscape

After changes

Figure 1

(a) Identify which **one** of the following is the most likely reason why this landscape has changed.

(1)

- ☒ **A** Weathering
- ☒ **B** Volcanic eruptions
- ☒ **C** Sea-level rise
- ☒ **D** River erosion

(b) Identify which **one** of the following is a weathering process.

(1)

- ☒ **A** Freeze-thaw
- ☒ **B** Abrasion
- ☒ **C** Deposition
- ☒ **D** Slumping

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(c) Explain **one** impact of glaciation on the landscape of the UK.

(2)

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(Total for Question 1 = 4 marks)

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Coastal Change and Conflict

2 (a) Study Figure 2 which shows waves on the coastline of Cornwall.



Figure 2

(i) State the type of waves shown.

(1)

.....

(ii) Identify which **one** of the following is the most likely cause of waves such as these.

(1)

- ☒ **A** a long fetch across the Atlantic Ocean
- ☒ **B** soft rocks that are easily eroded
- ☒ **C** a short fetch across the North Sea
- ☒ **D** a period of very cold weather

(b) Explain **one** reason why there may be an increase in the frequency of storms in the future.

(2)

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(c) Explain the difference between concordant and discordant coastlines. You may use a diagram to help your answer.

(4)

(Total for Question 2 = 8 marks)

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3 Study Figure 3 which is a photograph of the River Severn in Shropshire.



Figure 3

(a) Identify which **one** of the following is the best description of the river landforms shown.

(1)

- ☒ **A** Waterfalls
- ☒ **B** Rapids
- ☒ **C** Meanders
- ☒ **D** Deltas

(b) Explain **one** way in which rivers transport their load.

(2)

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(c) Explain **two** differences between upper course and lower course river landscapes.

(4)

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(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 4a and Figure 4b, which show data about the distribution of igneous and metamorphic rocks in the British Isles and its relief.

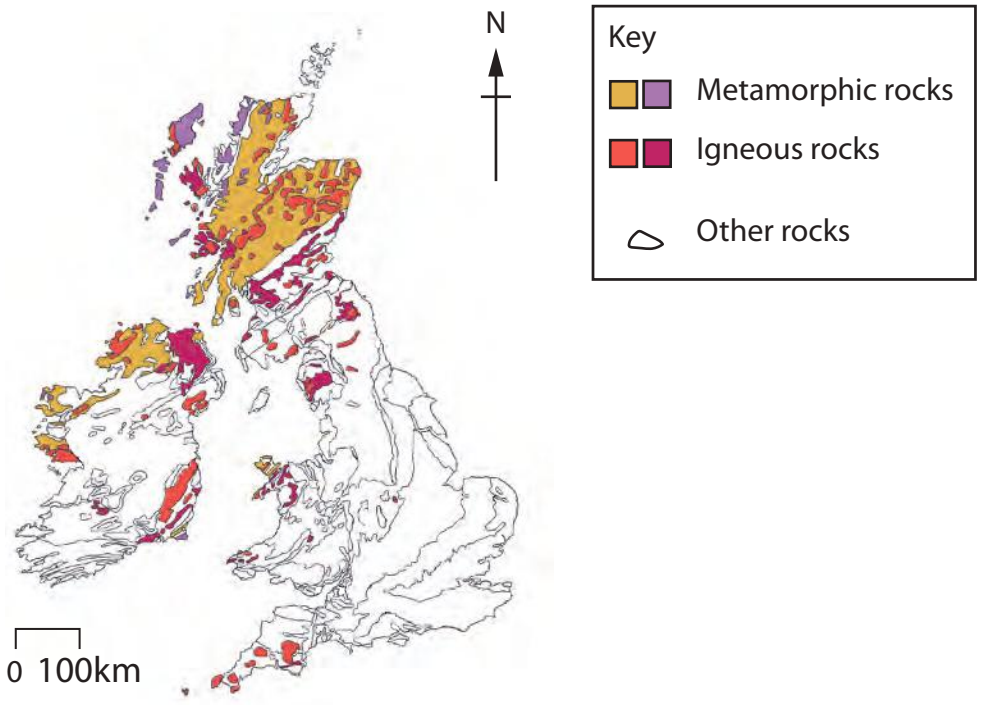


Figure 4a

Figure 4a shows the distribution of igneous and metamorphic rocks in the British Isles.

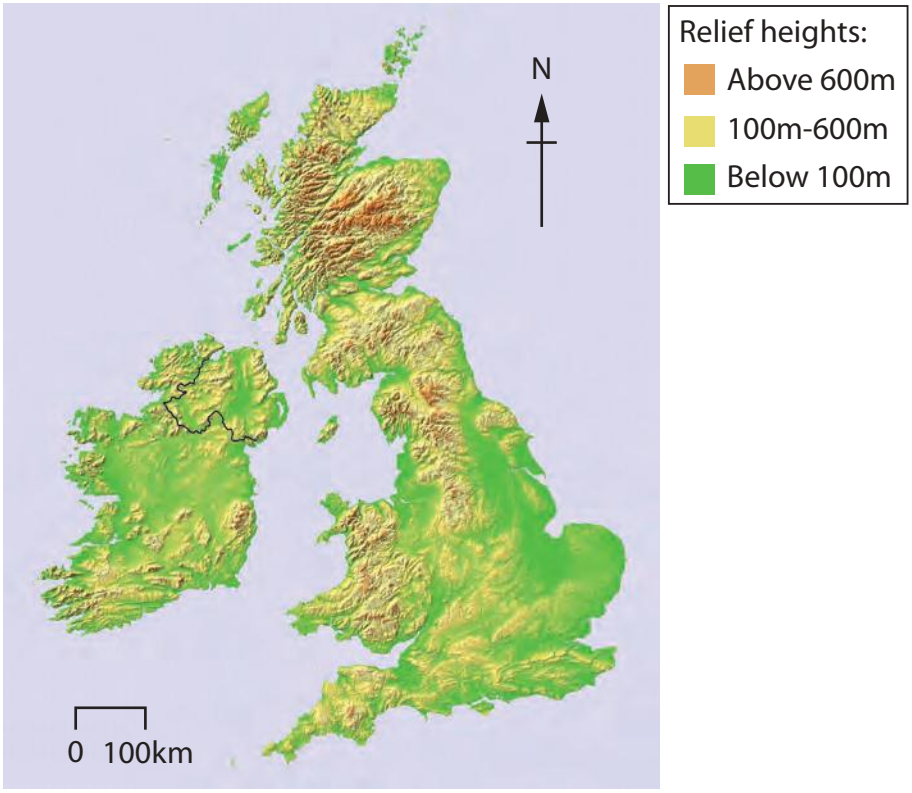


Figure 4b

Figure 4b shows the relief of the British Isles.

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Assess the influence of geology on the landscape of the UK.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions in this section. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 5 which shows which age groups are dominant (in the majority) in different areas of the UK.

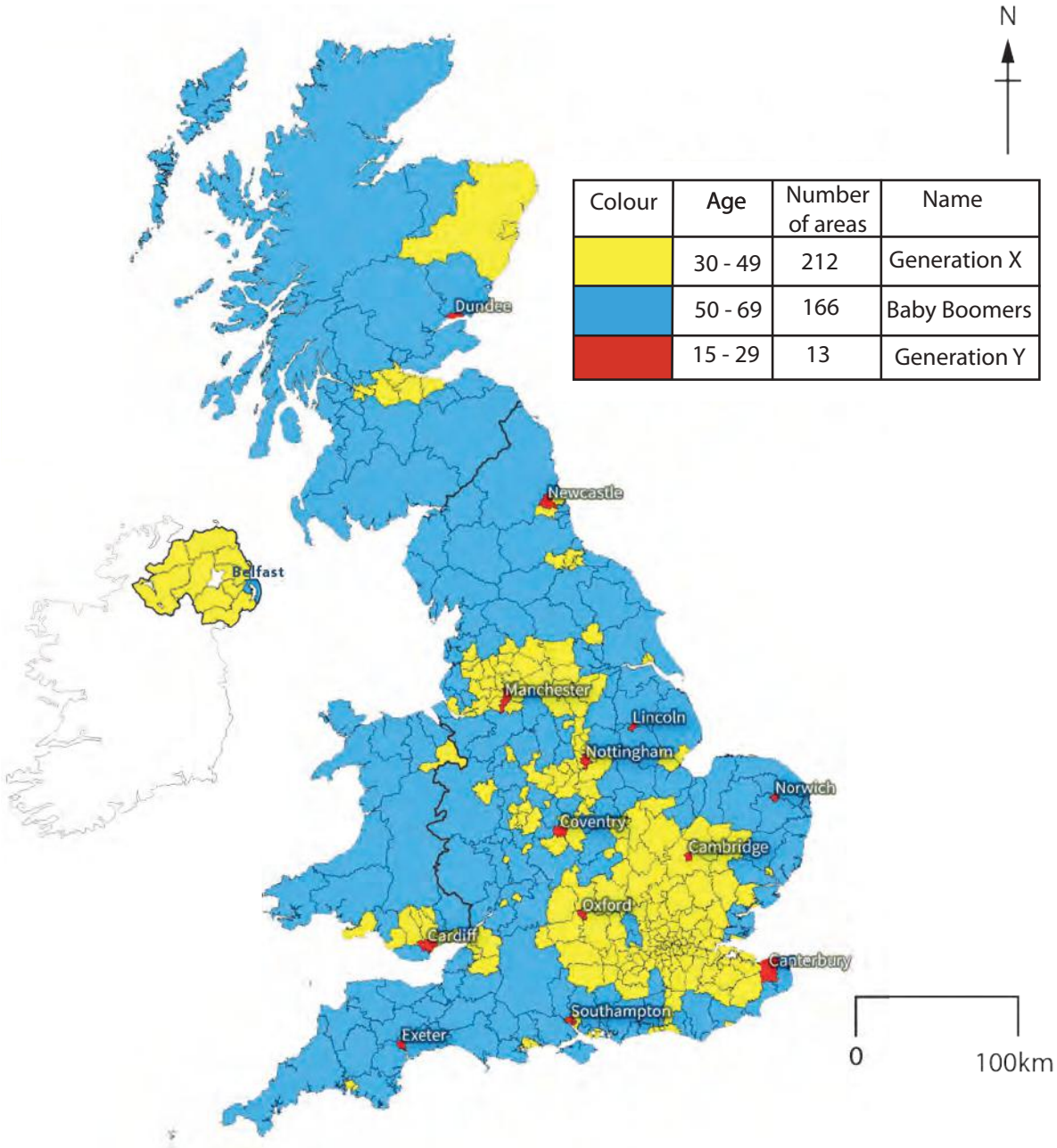


Figure 5

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(i) Identify which **one** of the countries of the UK is dominated by Generation X.

(1)

- ☒ **A** Northern Ireland
- ☒ **B** England
- ☒ **C** Scotland
- ☒ **D** Wales

(ii) Calculate the percentage of areas dominated by 'Baby Boomers'.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

..... %

(iii) State **two** reasons for the distribution of the areas dominated by Generation Y.

(2)

1 .....

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(b) Explain **one** reason for the growth of tertiary employment in the UK.

(2)

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(Total for Question 5 = 7 marks)

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Dynamic UK Cities

6 (a) Study Figure 6 which is a map of a UK city showing building height.



Figure 6

(i) Identify which **one** of the following is most likely to be the location of the city centre.

(1)

- ☒ **A** south-west corner of the map
- ☒ **B** north-west corner of the map
- ☒ **C** centre of the map
- ☒ **D** north-east corner of the map

(ii) Identify the most likely function of buildings which are under 10 metres in height.

(1)

.....

(iii) Explain **one** reason why building height varies in urban areas.

(2)

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(b) For a UK city that you have studied, explain **one** positive and **one** negative effect of regeneration.

Named UK city .....

(4)

Positive effect

Negative effect

(c) For a named UK city, explain **one** way in which migration has changed its population.

Named UK city .....

(4)

(Total for Question 6 = 12 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be awarded for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 7 which shows information about what happens to graduates at selected UK universities when they complete their studies.

The top 5 universities and bottom 5 universities measured by the percentage of graduates who leave their university town/city after graduation			
Location of university	***% of graduates who leave after graduation***	***Population of town/city***	***Total number of students at university***
Top 5			
Exeter	89%	117,000	23,200
Warrington	87%	202,000	13,600
Coventry	84%	325,000	31,700
Reading	83%	163,000	15,800
Cambridge	82%	158,000	19,900
Bottom 5			
Glasgow	46%	621,000	28,600
Birmingham	44%	1,100,000	34,800
Belfast	42%	333,000	23,800
Manchester	40%	545,000	40,500
London	25%	8,700,000	160,500

Figure 7

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Assess the possible causes and consequences of this movement of graduates.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided.

If you answer Question 8 put a cross in the box ☒ .

Investigating Coastal Change and Conflict

8 (a) Study Figure 8, which are photographs of the two beaches chosen by a group of students studying the impact of coastal management on coastal processes at two different locations.

- The students chose to measure beaches at two different locations.
- The chosen locations are about 10 km apart with Location A on a south-east facing coastline and Location B on a south-west facing coastline.
- At each location they selected three sites to carry out their beach profiles.
- They intended to measure beach gradient and sediment characteristics.



Location A



Location B

Figure 8

(i) Suggest an enquiry question or hypothesis that the students might have proposed for their investigation.

(2)

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(ii) Suggest **two** problems that the students' choice of locations may have caused for data collection.

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(iii) Explain how the use of Ordnance Survey (OS) maps might have helped the students choose their two beach locations and the three sites on each of those beaches to carry out the profiles.

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(b) You have carried out your own fieldwork investigating how and why coastal management impacts on coastal processes.

Name your coastal fieldwork location:

Assess the accuracy and reliability of the results of your investigation.

(8)

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(Total for Question 8 = 18 marks)

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Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) Study Figure 9, which are photographs of the two access points chosen by a group of students studying river channel changes on a river at two different locations.

- The students chose to measure river channels at two different locations.
- The chosen locations are about 10 km apart with Location A furthest upstream and Location B furthest downstream.
- At each location they selected three sites to carry out their channel measurements.
- They intended to measure channel width and channel depth.



Location A



Location B

Figure 9

(i) Suggest an enquiry question or hypothesis that the students might have proposed for their investigation.

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(ii) Suggest **two** problems that the students' choice of locations may have caused for data collection.

(4)

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(iii) Explain how the use of Ordnance Survey (OS) maps might have helped the students choose their two river locations and the three sites on each of those rivers to carry out their channel measurements.

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(b) You have carried out your own fieldwork investigating how and why drainage basin characteristics influence flood risk for people and property.

Name your river fieldwork location:

Assess the accuracy and reliability of the results of your investigation.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.

Write your answers in the space provided.

If you answer Question 10 put a cross in the box ☒ .

Investigating Dynamic Urban Areas

10 You have carried out your own fieldwork investigating environmental quality in an urban area.

Name your urban area:

.....

(a) Explain **one** way in which you used quantitative data to measure differences in the environmental quality of your chosen area.

(2)

.....

.....

.....

.....

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(b) Using an annotated diagram that shows **one** way in which you presented the results of your data collection, explain your results.

(4)

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(c) Explain how you would improve your data collection methods to increase their accuracy.

(4)

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(d) In 2017 a group of students carried out a questionnaire in three different urban areas, one in the city centre, one in the suburbs and one in a rural settlement just inside the city boundary.

The interviews were conducted between 13:00 and 15:00 on a Thursday afternoon by asking people in the three different areas;

(a) if they were residents in that location and

(b) if they would be prepared to take part in a survey.

The students interviewed 30 residents in total, 13 in the city centre, 10 in the suburb and 7 in the rural settlement just inside the city boundary.

The residents were asked to identify the **three** most important factors for them when they chose their current residence. The results are shown below in Figure 10.

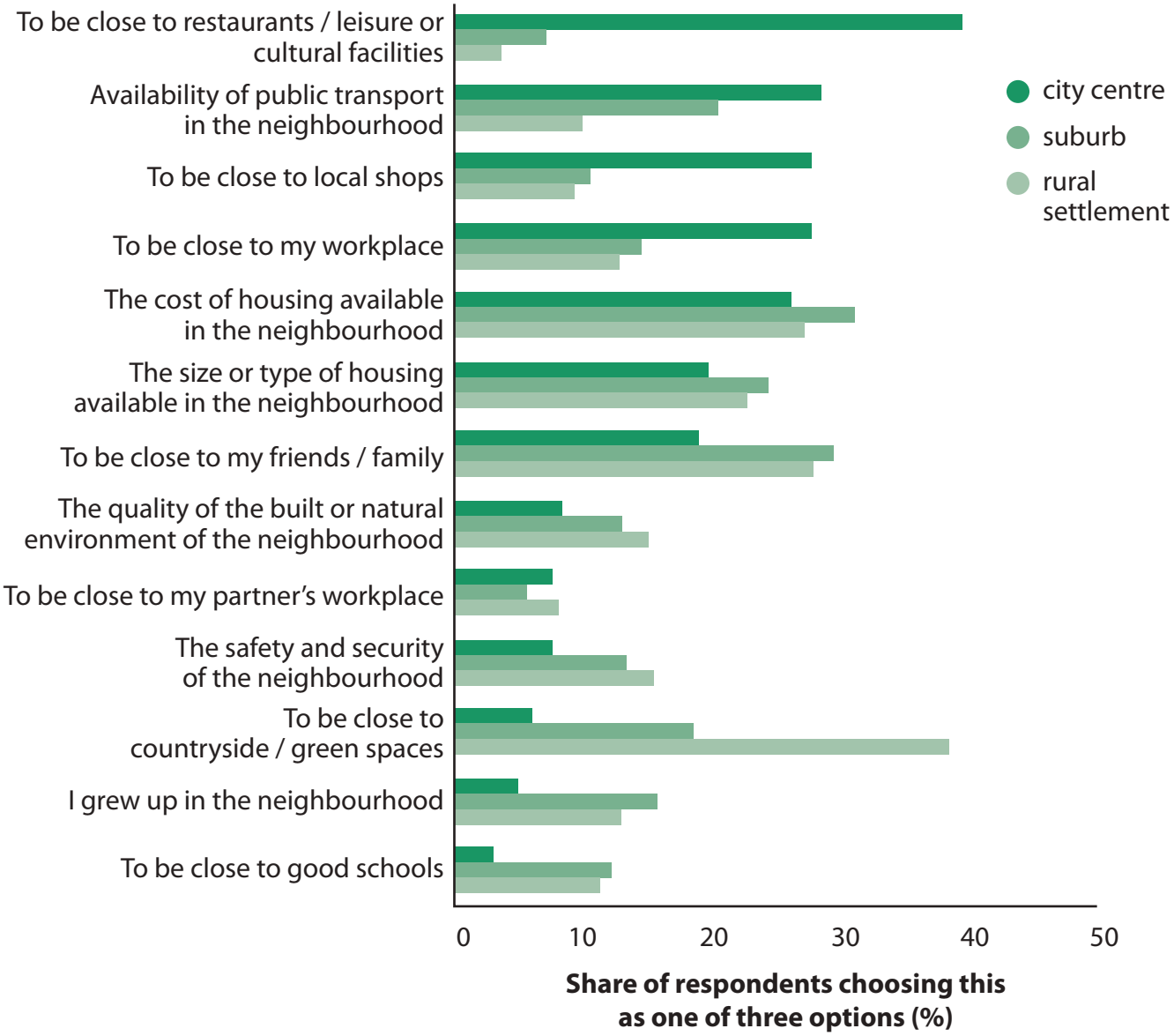


Figure 10

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The students concluded that housing cost and closeness to family and friends were the most important factors overall.

Assess the evidence for this conclusion.

(8)

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(Total for Question 10 = 18 marks)

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Do not answer Question11 if you have already answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 You have carried out your own fieldwork investigating environmental quality in a rural environment.

Name your rural environment:

.....

(a) Explain **one** way in which you used quantitative data to measure differences in the environmental quality of your chosen area.

(2)

.....

.....

.....

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(b) Using an annotated diagram that shows **one** way in which you presented the results of your data collection, explain your results.

(4)

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(c) Explain how you would improve your data collection methods to increase their accuracy.

(4)

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(d) In 2017 a group of students, divided into three groups, carried out a questionnaire in three different villages located 15km (Village A) , 25km (Village B) and 35km (Village C) from the city.

The interviews were conducted between 13:00 and 15:00 on a Thursday afternoon by asking people in the different villages;

(a) if they were residents in that village and

(b) if they would be prepared to take part in a survey.

The students interviewed 30 residents in total, 13 in Village A, 10 in Village B and 7 in Village C.

The interviewees were asked to identify the **three** most important factors to them when they chose their current residence. The results are shown below in Figure 11.

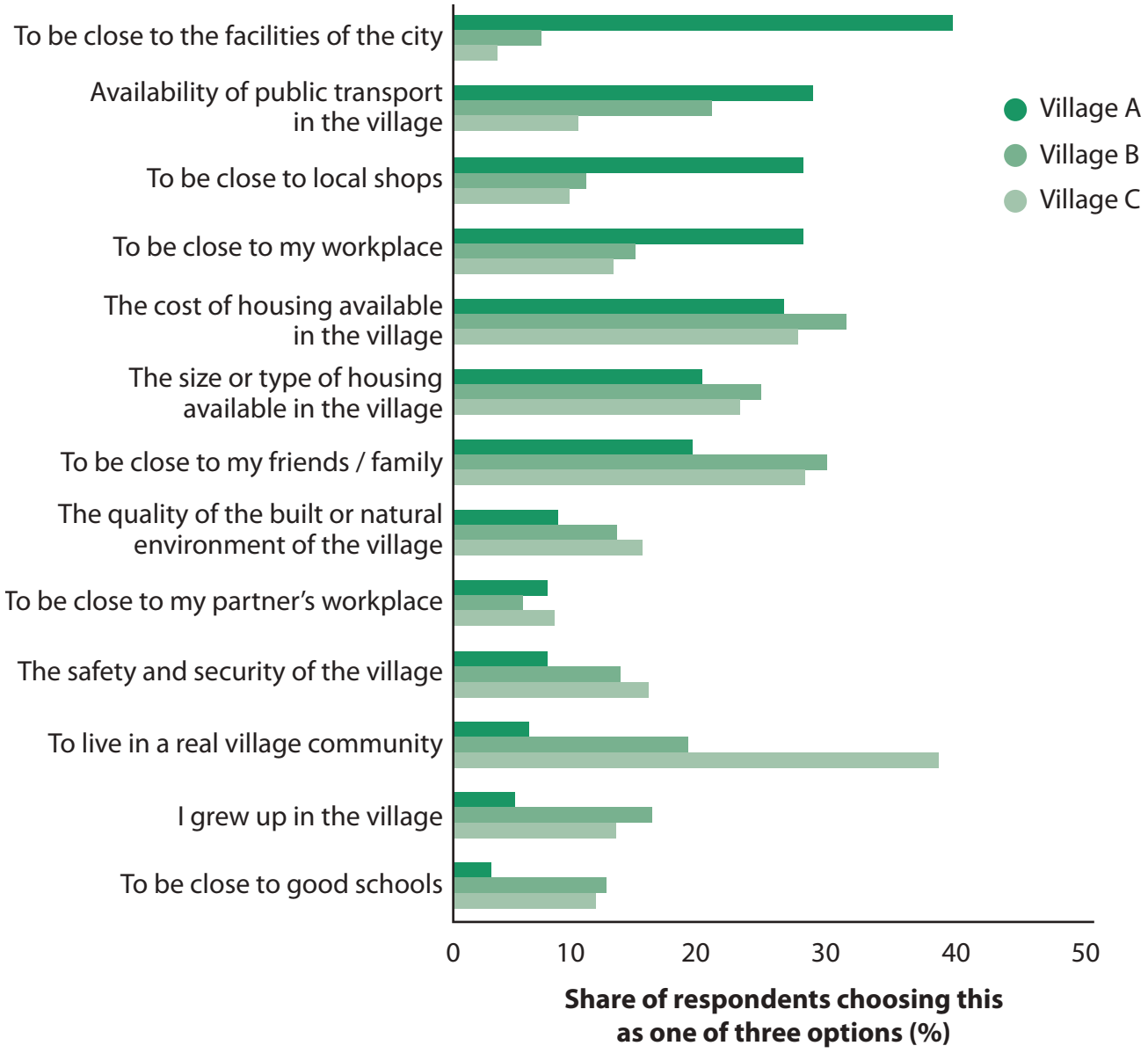


Figure 11

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The students concluded that housing cost and closeness to family and friends were the most important factors overall.

Assess the evidence for this conclusion.

(8)

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Mark Scheme (Results)

November 2020

Pearson Edexcel GCSE
In Geography B (1GB0)
Paper 02: UK Geographical Issues

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Answer	Marks
1(a)	B – it is mostly on steeper ground All other answers clearly mistaken – see photograph Figure 1	**(1)**

Question	Answer	Marks
1(b)	B – the North-west of Scotland All other answers clearly and demonstrably wrong (AO1)	**(1)**

Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate characteristic of sedimentary rock and a further mark for an extension/development of that idea. Generally formed in water over a long period of time (1) so have bedding planes (1) Are frequently affected by tectonic movements after formation so (1) folded and fissured/faulted (1) Generally less resistant to weathering/erosion than igneous/metamorphic rocks (1) so form lowland landscapes (1) **Accept any other appropriate response**	**(2)**

Question	Answer	Marks
2 (a) (i)	Either seawall or groynes (or any synonyms of same) (1)	**(1)**

Question	Answer	Marks
2 (a) (ii)	B – high wave energy and easily eroded rock All other answers demonstrably wrong AO1	**(1)**

Question	Answer	Marks
2(a) (iii)	Award one mark for identifying an appropriate reason why hard engineering can reduce coastal erosion rock and a further mark for an extension/development of that idea. Sea-walls provide a physical barrier to wave energy (1) absorbing or reflecting that energy so protecting the coast (1)	**(2)**

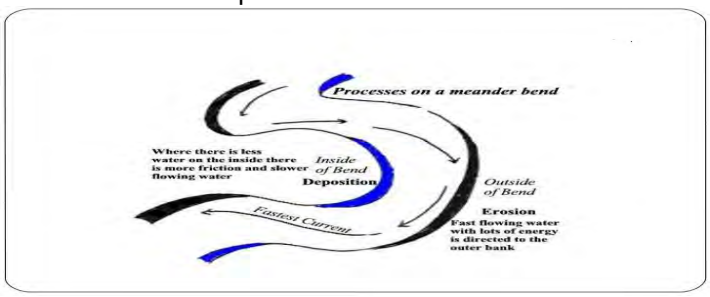
	Groynes trap sand that would otherwise be moved along the coast narrowing the beach (1) which acts of a type of 'shock absorber' reducing the energy available for cliff/coast erosion (1) **Accept any other appropriate response for any type of hard engineering**	

Question	Answer	Marks
2(b)	Award one mark for the basic idea of different values to the coastline (1) because they have different land uses and/or functions (1) with industrial areas and/or tourist resorts more densely populated areas so more valuable (1) as opposed to agricultural land and/or lightly populated areas (1) **Accept any other appropriate response**	**(4)** **(1) +(1+1+1)**

Question	Answer	Marks
3 (a)	B – The western half of the map has most of the flood-risk areas All other answers demonstrably wrong – see Figure 3	**(1)**

Question	Answers	Marks
3 (b)	Award one mark for identifying correct reason and a second for extending that idea to apply it to transport processes Building on floodplains/urbanisation (1) which can reduce infiltration and/or puts more people/property at risk (1) Deforestation (1) which reduces infiltration and so increases runoff making rivers 'peakier' (1) River channel management preventing river flooding upstream (1) so making river discharge larger downstream thus increasing risk (1) Climate change idea (1) increasing rainfall and/or making weather stormier increasing discharge (1) **Accept any other appropriate response**	**(2)**

Question	Answer	Marks

3(c)	Award up to three marks for the role of erosion and up to three marks for the role of deposition  Erosion through hydraulic action and abrasion (1) on the outside of a bend progressively increases the sinuosity (or similar idea) (1) whilst deposition of the eroded material (1) on the inside of the bend on point bars (1) also increases sinuosity **Accept any other appropriate response**	**(4)** **(1+1) + (1+1) or** **(1+1+1) +1**

Question	**Indicative content**
4	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • The glaciation of the UK involves both erosion and deposition • Erosional landscapes are often higher ground and have distinctive features • These (upland) landscapes are often difficult to farm and settlement is often light and dispersed • Lowland glaciated landscapes are dominated by boulder clay which masks variations in the pre-glacial landscape • These deposits can provide good quality farmland and are more densely populated (than the upland areas) • Unglaciated landscapes are also varied and there is high ground (e.g. Dartmoor) • Post glacial sea level changes have created distinctive landscapes such as rias and estuaries • Lowland areas, whether glaciated or not, have higher carrying capacities. **AO4 (4 marks)** • The glaciated landscapes in Scotland (north UK) are of one upland glaciated landscape (Cairngorms) and one in the western isles (Hebrides)

	• The Cairngorm photograph shows a ribbon lake and a U-shaped valley – there is much exposed rock on show • Not all of the (western Isles) photograph is lowland with a complex lakes/loch/lochan landscape in the foreground but high ground in the background • Lake District scene appears to show a cirque/corrie/tarn and an arete – again there is much exposed rock on show • The fourth view of glaciated UK is a lowland coastal landscape which appears flat with low cliffs • The unglaciated landscapes show a ria – flooded river valley and a 'rolling' landscape of chalk country – many fields in view • Only one photograph shows human settlement – lowland flooded valley

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant

		understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)(i)	C – Keeping the school open All other answers demonstrably mistaken – see Figure 5	**(1)**

Question number	Answer	Marks
5(a)(ii)	Allow one mark for each reason. Cheaper property (1) (Perceived to be) quieter (1) (Perceived to be) safer/less crime (1) More attractive physical environment (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Marks
5 (b)	Award one mark for basic reason and a second through an extension which might be an application of that idea. Increasing globalisation (1) with reduction in barriers to free trade (1) Deregulation by governments (1) to attract FDI (Foreign Direct Investment) (1) Growth of London as a financial centre (1) so more foreign banks established here (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
6 (a)(i)	C = most of the buildings have been painted All other responses demonstrably wrong – see Figure 6	**(1)**

Question number	Answer	Marks
6(a)(ii)	Any one of the following ideas No obvious national chain stores (1) Shops are quite small (1) Not much 'footfall' on pavement (1) No/little traffic on road (1) **Accept any other appropriate response**	**(1)**

Question number	Answer	Marks
6 (a)(iii)	Award one mark for making a relevant point about a strategy and a second mark for the development of that idea. Recycling cuts down of the production of waste (1) that would otherwise have to be incinerated or go to landfill – both of which atre damaging to the environment (1) Bike rental reduces the need to drive or take public transport (1) which reduces the consumption of fossil fuels which contribute to global warming (1) Congestion charges make the use of cars more expensive (1) so encourage people to take public transport which reduces the production of damaging and toxic emissions such as nitrous oxide and particulate matter (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Marks
6 (b)	Award one mark for identifying a basic negative/positive effect and a further mark for expansion/application of that idea Specific detail will depend on chosen UK city but expect… Improved environment (1) detail of same with some local element (1) Improved employment opportunities (1) detail of same with some local element (1) Improved built environment (1) detail of same with some local element (1) Negative impact of availability of affordable housing (1) so people displaced (1) Negative impact on transport systems (1) extra loading on buses/trains etc (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
6(c)	Award one mark for outlining/explaining a difference and a further mark or marks for expansion/application of the reasons for that difference. Specific detail will depend on chosen UK city but expect. Land use in the CBD is dominated by retail/commercial uses which are prepared to pay high rents for centrality (or similar idea) (1) whilst the rural fringe will have residence and undeveloped greenfield space because less desirable for other activities (1) Planners have a large role in saying what goes where in a city (1) so will often refuse permission for building offices/factories on urban fringes whereas they will allow it in the CBD (1) Land prices are high in CBDs so it is expensive to provide housing there so retail/commerce dominate (1) but cheaper on the fringe so more housing (1)	**(4)** (1+1) + (1+1)

	Transport links tend to lead to CBDs so they are attractive for businesses (1) whereas they are poor(er) on the urban fringe so less attractive for anything other other than residential land-use (1) Cap at 3 if location is not clearly identified through located detail in the text **Accept any other appropriate response**	

Question	Indicative content
7	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Wealth highly concentrated as a result of differences in income and rates of unemployment • Likely to result to significant variations in social and economic deprivation • Low income levels have impact on local authority incomes and thus services • Spiral of decline because of negative multiplier effect • Which in turn discourages investment hence blight in deindistruaisng regions • Cost of living might vary e.g. housing costs • Very large inequalities can cause social tension and potential violent protests **AO4 (4 marks)** • May regions are quite similar – not much variance if London is ignored • Only three regions notably above national average – London, SE England and Eastern England • All of the wealthier areas are in the same geographic region • The poorest area of London has higher GDI than ricest area of either Wales or Northern Ireland. • Northern Ireland and Wales both poor but also pretty uniform (homogenous) • London, by contrast, has enormous internal variations

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a)	Award one mark for explaining the basic method and second mark for a development of that. Depends on fieldwork but expect; We measured the width of the beach using a tape and metre rule (1) taking measurements at x sites to the shoreline from our access point (1) We measured gradient using a clinometer, a tape and ranging poles (1) from the shoreline from our point of access (1) **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
8 (b)	Award one mark for a recognisable presentation of a graph e.g. a divided bar-graph or a line graph (1) a further mark for some recognisable labelling on the diagram; perhaps the axes (1) Two further marks for annotation explaining the choice as in; this allowed us to make a comparison (1) this showed variations from site to site, clearly (1) **Allow any other appropriate response**	**(4)**

Question number	Answer	Marks
8 (c)	Award **one** mark for identifying a basic reason explaining the value of a case study or a theory e.g. it helped to explain why longshore drift moved sand northwards/ the beach profiles were steeper on the beach with larger waves(1) Allow three further marks for the details of that point as in; it allowed us to spot that our data was not exactly what was predicted/expected (1) because at site 3 there was…. (1) this was explained by… (1)	**(4)** **(1) + (1+1+1**)

	Allow any other appropriate response	

Question Number	Indicative content
8 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • There are two main beaches on the map to choose from in order to make a comparison • The area is upland with high cliffs on both beaches • Both beaches have very limited/no width at high water • The larger beach is quite long – the smaller quite wide • There are large areas of shingle /rocks on both beaches • There are very few access points to the beaches • There are many footpaths and rights of way for access to all of the beaches but no obvious parking places **AO4** • Safety should be a primary concern – both beaches pose problems at high water • Time is also a limiting factor and with equipment to carry closeness to the hostel in New Quay is a factor • Legality of access should be considered and there are rights of way (footpaths and tracks) to both beaches • Access to the eastern beach (Little Quay Bay) is not east nor obvious on the map • There is no obvious beach management on either beach • If sites are chosen (sampled) systematically then a decision needs to be taken about distances between those sites and how many sites should be selected to demonstrate differences along the beaches

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a)	Award one mark for explaining the basic method and second mark for a development of that. Depends on fieldwork but expect; We measured depth using a tape and metre rule (1) taking measurements at x sites upstream/downstream from our access point (1) We measured width using a tape (1) taking measurements at x sites upstream/downstream form our access point (1) We measured gradient using a clinometer, a tape and ranging poles (1) both upstream and downstream from our point of access (1) **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
9 (b)	Award one mark for a recognisable presentation of a graph e.g. a divided bar-graph or a line graph (1) a further mark for some recognisable labelling on the diagram; perhaps the axes (1) Two further marks for annotation explaining the choice as in; this allowed us to make a comparison (1) this showed variations from site to site, clearly (1) **Allow any other appropriate response**	**(4)**

Question number	Answer	Marks
9 (c)	Award **one** mark for identifying a basic reason explaining the value of a case study or a theory e.g. it helped to explain why the channel became wider in a downstream direction/it helped explain why flooding was more likely in the lower course (1) Allow three further marks for the details of that point as in; it allowed us to spot that our data was not exactly what was	**(4)** **(1) + (1+1+1)**

	predicted/expected (1) because at site 3 there was…. (1) this was explained by… (1) **Allow any other appropriate response**	

Question Number	Indicative content
9 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • There are several streams/rivers on the map to choose from in order to make a comparison • The area is an upland area with many steep slopes especially on the west side of the 'beck; flowing north to south • The larger river (River Swale) does appear to have a floodplain – centre south of the map at Sheepfold • The larger river is quite wide – twice the width of the road • There may be small areas of floodplain on the north-south flowing 'beck' • There are very few roads on the map – none at all to the north of Gunnerside • There are many footpaths and rights of way for access to all of the streams/rivers **AO4** • Safety should be a primary concern – the larger river (the Swale) is probably too wide and deep to take measurements safely although map evidence is not definitive • Time is also a limiting factor and with equipment to carry closeness to the hostel in Gunnerside is a factor • Legality of access should be considered and there are rights of way (footpaths and tracks) alongside the (Gunnerside) Beck flowing north to south which seem ideal • Those tracks are on both sides of the beck for about a kilometre north of the village at least • If sites are chosen (sampled) systematically then a decision neds to be taken about distances between those sites and how many

	sites should be selected to demonstrate downstream differences • Other small streams might be measured e.g. Shore Gill to allow a comparison especially is the basin size is very different as it would appear.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
10 (a)	Award one mark for the correct answer and one for the working(s) As in (1.5+1.2) – (-0.5 + - 1.0) = 2.7 - 1.5 -= **+1.2**	**(2)**

Question number	Answer	Marks
10 (b)	Award one mark each for following; They might have surveyed all the streets in these districts (1) if they had the time/resources/numbers (1) They might have sampled the streets (1) using an OS map to select (1) They might have listed the streets alphabetically and used random numbers (1) to select a sample **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
10 (c)	Award one mark for basic point about secondary data and a further mark for the development of how it might have been used. They used census information to select the areas to select contrasting areas of the city (1) so that it could be compared with the primary data (1) They used the IMD data base to select contrasting areas of the city (1) so that it could be compared with the primary data (1) Do **not** award a mark for the simple identification of a legitimate secondary data source **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
10 (d)	Award one mark for basic reason/evidence for the conclusion and a further mark for the development of that point to support, perhaps through data For two elements there is a contrast between the averages (1) between 2 and 3 for graffiti and litter (1) Major difference for traffic noise (1) although in this case worse in Lower Walton unlike the other measures (1) Range of street results quite similar (1) but obviously overall averages show that relatively few streets in Westgate have positive scores unlike Lower Walton (1) **Allow any other appropriate response**	**(4)** (1+1) + (1+1)

Question Number	Indicative content
10 (e)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Assessment should include both strengths and weaknesses which are clearly distinguished. • Strengths might be both pragmatic – ease of collecting data and academic – sourcing useful information to answer/address a hypothesis/question. • Weaknesses might also be either pragmatic and/or academic • Academic weaknesses likely to address both issues of both accuracy and reliability • Accuracy might be explored through the quality of equipment used. • Accuracy might be explored through the care and attention taken by the students. • Reliability might be explored in terms of how typical the day was when primary data was collected. • Reliability might be explored through the quality of sampling in the selection of sites **AO4** • Should include references to methods of primary data collection with clear focus on variations in quality of life either from place to place and/or from person to person or group top group to illustrate both strengths and weaknesses • Should have clear focus on at least one hypothesis and/or testable question

	• Should include references to primary data gathered focussing on factors that might influence quality of life. • Should include clear references to strengths in terms of practicality – time/resources/numbers • Should include clear commentary about problems of data collection that might impact on accuracy and reliability e.g. numbers of responses. • Should address issues of objectivity/subjectivity especially concerning Environmental Quality Surveys • Should address sampling issues both in terms of places and also people • May come to a view

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	Award one mark for the correct answer and one for the working(s) As in (1.5+1.2) – (-0.5 + - 1.0) = 2.7 - 1.5 -= **+1.2**	**(2)**

Question number	Answer	Marks
11 (b)	Award one mark each for following; They might have surveyed all the streets in these districts (1) if they had the time/resources/numbers (1) They might have sampled the streets (1) using an OS map to select (1) They might have listed the streets alphabetically and used random numbers (1) to select a sample **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
11 (c)	Award one mark for basic point about secondary data and a further mark for the development of how it might have been used. They used census information to select the areas to select contrasting areas of the city (1) so that it could be compared with the primary data (1) They used the IMD data base to select contrasting areas of the city (1) so that it could be compared with the primary data (1) Do **not** award a mark for the simple identification of a legitimate secondary data source **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
11 (d)	Award one mark for basic reason/evidence for the conclusion and a further mark for the development of that point to support, perhaps through data For two elements there is a contrast between the averages (1) between 2 and 3 for graffiti and litter (1) Major difference for traffic noise (1) although in this case worse in Winterbourne Abbott unlike the other measures (1) Range of street results quite similar (1) but obviously overall averages show that relatively few streets in Lower Withering have positive scores unlike Winterbourne Abbott (1) **Allow any other appropriate response**	**(4)** (1+1) + (1+1)

Question Number	Indicative content
11 (e)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Assessment should include both strengths and weaknesses which are clearly distinguished. • Strengths might be both pragmatic – ease of collecting data and academic – sourcing useful information to answer/address a hypothesis/question. • Weaknesses might also be either pragmatic and/or academic • Academic weaknesses likely to address both issues of both accuracy and reliability • Accuracy might be explored through the quality of equipment used. • Accuracy might be explored through the care and attention taken by the students. • Reliability might be explored in terms of how typical the day was when primary data was collected. • Reliability might be explored through the quality of sampling in the selection of sites **AO4** • Should include references to methods of primary data collection with clear focus on variations in quality of life either from place to

	place and/or from person to person or group top group to illustrate both strengths and weaknesses • Should have clear focus on at least one hypothesis and/or testable question • Should include references to primary data gathered focussing on factors that might influence quality of life. • Should include clear references to strengths in terms of practicality – time/resources/numbers • Should include clear commentary about problems of data collection that might impact on accuracy and reliability e.g. numbers of responses. • Should address issues of objectivity/subjectivity especially concerning Environmental Quality Surveys • Should address sampling issues both in terms of places and also people • May come to a view

Level	Mark	Descriptor
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Mark Scheme (Results)

November 2020

Pearson Edexcel GCSE
In Geography B (1GB0)
Paper 02: UK Geographical Issues

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Answer	Marks
1(a)	B – it is mostly on steeper ground All other answers clearly mistaken – see photograph Figure 1	**(1)**

Question	Answer	Marks
1(b)	B – the North-west of Scotland All other answers clearly and demonstrably wrong (AO1)	**(1)**

Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate characteristic of sedimentary rock and a further mark for an extension/development of that idea. Generally formed in water over a long period of time (1) so have bedding planes (1) Are frequently affected by tectonic movements after formation so (1) folded and fissured/faulted (1) Generally less resistant to weathering/erosion than igneous/metamorphic rocks (1) so form lowland landscapes (1) **Accept any other appropriate response**	**(2)**

Question	Answer	Marks
2 (a) (i)	Either seawall or groynes (or any synonyms of same) (1)	**(1)**

Question	Answer	Marks
2 (a) (ii)	B – high wave energy and easily eroded rock All other answers demonstrably wrong AO1	**(1)**

Question	Answer	Marks
2(a) (iii)	Award one mark for identifying an appropriate reason why hard engineering can reduce coastal erosion rock and a further mark for an extension/development of that idea. Sea-walls provide a physical barrier to wave energy (1) absorbing or reflecting that energy so protecting the coast (1)	**(2)**

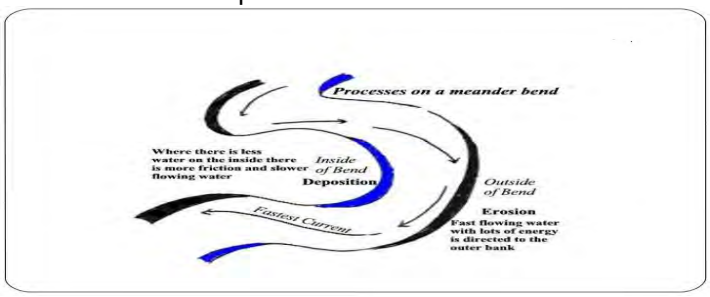
	Groynes trap sand that would otherwise be moved along the coast narrowing the beach (1) which acts of a type of 'shock absorber' reducing the energy available for cliff/coast erosion (1) **Accept any other appropriate response for any type of hard engineering**	

Question	Answer	Marks
2(b)	Award one mark for the basic idea of different values to the coastline (1) because they have different land uses and/or functions (1) with industrial areas and/or tourist resorts more densely populated areas so more valuable (1) as opposed to agricultural land and/or lightly populated areas (1) **Accept any other appropriate response**	**(4)** **(1) +(1+1+1)**

Question	Answer	Marks
3 (a)	B – The western half of the map has most of the flood-risk areas All other answers demonstrably wrong – see Figure 3	**(1)**

Question	Answers	Marks
3 (b)	Award one mark for identifying correct reason and a second for extending that idea to apply it to transport processes Building on floodplains/urbanisation (1) which can reduce infiltration and/or puts more people/property at risk (1) Deforestation (1) which reduces infiltration and so increases runoff making rivers 'peakier' (1) River channel management preventing river flooding upstream (1) so making river discharge larger downstream thus increasing risk (1) Climate change idea (1) increasing rainfall and/or making weather stormier increasing discharge (1) **Accept any other appropriate response**	**(2)**

Question	Answer	Marks

3(c)	Award up to three marks for the role of erosion and up to three marks for the role of deposition  Erosion through hydraulic action and abrasion (1) on the outside of a bend progressively increases the sinuosity (or similar idea) (1) whilst deposition of the eroded material (1) on the inside of the bend on point bars (1) also increases sinuosity **Accept any other appropriate response**	**(4)** **(1+1) + (1+1) or** **(1+1+1) +1**

Question	**Indicative content**
4	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • The glaciation of the UK involves both erosion and deposition • Erosional landscapes are often higher ground and have distinctive features • These (upland) landscapes are often difficult to farm and settlement is often light and dispersed • Lowland glaciated landscapes are dominated by boulder clay which masks variations in the pre-glacial landscape • These deposits can provide good quality farmland and are more densely populated (than the upland areas) • Unglaciated landscapes are also varied and there is high ground (e.g. Dartmoor) • Post glacial sea level changes have created distinctive landscapes such as rias and estuaries • Lowland areas, whether glaciated or not, have higher carrying capacities. **AO4 (4 marks)** • The glaciated landscapes in Scotland (north UK) are of one upland glaciated landscape (Cairngorms) and one in the western isles (Hebrides)

	• The Cairngorm photograph shows a ribbon lake and a U-shaped valley – there is much exposed rock on show • Not all of the (western Isles) photograph is lowland with a complex lakes/loch/lochan landscape in the foreground but high ground in the background • Lake District scene appears to show a cirque/corrie/tarn and an arete – again there is much exposed rock on show • The fourth view of glaciated UK is a lowland coastal landscape which appears flat with low cliffs • The unglaciated landscapes show a ria – flooded river valley and a 'rolling' landscape of chalk country – many fields in view • Only one photograph shows human settlement – lowland flooded valley

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Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant

		understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)(i)	C – Keeping the school open All other answers demonstrably mistaken – see Figure 5	**(1)**

Question number	Answer	Marks
5(a)(ii)	Allow one mark for each reason. Cheaper property (1) (Perceived to be) quieter (1) (Perceived to be) safer/less crime (1) More attractive physical environment (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Marks
5 (b)	Award one mark for basic reason and a second through an extension which might be an application of that idea. Increasing globalisation (1) with reduction in barriers to free trade (1) Deregulation by governments (1) to attract FDI (Foreign Direct Investment) (1) Growth of London as a financial centre (1) so more foreign banks established here (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
6 (a)(i)	C = most of the buildings have been painted All other responses demonstrably wrong – see Figure 6	**(1)**

Question number	Answer	Marks
6(a)(ii)	Any one of the following ideas No obvious national chain stores (1) Shops are quite small (1) Not much 'footfall' on pavement (1) No/little traffic on road (1) **Accept any other appropriate response**	**(1)**

Question number	Answer	Marks
6 (a)(iii)	Award one mark for making a relevant point about a strategy and a second mark for the development of that idea. Recycling cuts down of the production of waste (1) that would otherwise have to be incinerated or go to landfill – both of which atre damaging to the environment (1) Bike rental reduces the need to drive or take public transport (1) which reduces the consumption of fossil fuels which contribute to global warming (1) Congestion charges make the use of cars more expensive (1) so encourage people to take public transport which reduces the production of damaging and toxic emissions such as nitrous oxide and particulate matter (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Marks
6 (b)	Award one mark for identifying a basic negative/positive effect and a further mark for expansion/application of that idea Specific detail will depend on chosen UK city but expect… Improved environment (1) detail of same with some local element (1) Improved employment opportunities (1) detail of same with some local element (1) Improved built environment (1) detail of same with some local element (1) Negative impact of availability of affordable housing (1) so people displaced (1) Negative impact on transport systems (1) extra loading on buses/trains etc (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
6(c)	Award one mark for outlining/explaining a difference and a further mark or marks for expansion/application of the reasons for that difference. Specific detail will depend on chosen UK city but expect. Land use in the CBD is dominated by retail/commercial uses which are prepared to pay high rents for centrality (or similar idea) (1) whilst the rural fringe will have residence and undeveloped greenfield space because less desirable for other activities (1) Planners have a large role in saying what goes where in a city (1) so will often refuse permission for building offices/factories on urban fringes whereas they will allow it in the CBD (1) Land prices are high in CBDs so it is expensive to provide housing there so retail/commerce dominate (1) but cheaper on the fringe so more housing (1)	**(4)** (1+1) + (1+1)

	Transport links tend to lead to CBDs so they are attractive for businesses (1) whereas they are poor(er) on the urban fringe so less attractive for anything other other than residential land-use (1) Cap at 3 if location is not clearly identified through located detail in the text **Accept any other appropriate response**	

Question	Indicative content
7	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Wealth highly concentrated as a result of differences in income and rates of unemployment • Likely to result to significant variations in social and economic deprivation • Low income levels have impact on local authority incomes and thus services • Spiral of decline because of negative multiplier effect • Which in turn discourages investment hence blight in deindistruaisng regions • Cost of living might vary e.g. housing costs • Very large inequalities can cause social tension and potential violent protests **AO4 (4 marks)** • May regions are quite similar – not much variance if London is ignored • Only three regions notably above national average – London, SE England and Eastern England • All of the wealthier areas are in the same geographic region • The poorest area of London has higher GDI than ricest area of either Wales or Northern Ireland. • Northern Ireland and Wales both poor but also pretty uniform (homogenous) • London, by contrast, has enormous internal variations

Level	Mark	Descriptor
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Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
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Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a)	Award one mark for explaining the basic method and second mark for a development of that. Depends on fieldwork but expect; We measured the width of the beach using a tape and metre rule (1) taking measurements at x sites to the shoreline from our access point (1) We measured gradient using a clinometer, a tape and ranging poles (1) from the shoreline from our point of access (1) **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
8 (b)	Award one mark for a recognisable presentation of a graph e.g. a divided bar-graph or a line graph (1) a further mark for some recognisable labelling on the diagram; perhaps the axes (1) Two further marks for annotation explaining the choice as in; this allowed us to make a comparison (1) this showed variations from site to site, clearly (1) **Allow any other appropriate response**	**(4)**

Question number	Answer	Marks
8 (c)	Award **one** mark for identifying a basic reason explaining the value of a case study or a theory e.g. it helped to explain why longshore drift moved sand northwards/ the beach profiles were steeper on the beach with larger waves(1) Allow three further marks for the details of that point as in; it allowed us to spot that our data was not exactly what was predicted/expected (1) because at site 3 there was…. (1) this was explained by… (1)	**(4)** **(1) + (1+1+1**)

	Allow any other appropriate response	

Question Number	Indicative content
8 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • There are two main beaches on the map to choose from in order to make a comparison • The area is upland with high cliffs on both beaches • Both beaches have very limited/no width at high water • The larger beach is quite long – the smaller quite wide • There are large areas of shingle /rocks on both beaches • There are very few access points to the beaches • There are many footpaths and rights of way for access to all of the beaches but no obvious parking places **AO4** • Safety should be a primary concern – both beaches pose problems at high water • Time is also a limiting factor and with equipment to carry closeness to the hostel in New Quay is a factor • Legality of access should be considered and there are rights of way (footpaths and tracks) to both beaches • Access to the eastern beach (Little Quay Bay) is not east nor obvious on the map • There is no obvious beach management on either beach • If sites are chosen (sampled) systematically then a decision needs to be taken about distances between those sites and how many sites should be selected to demonstrate differences along the beaches

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Question number	Answer	Marks
9 (a)	Award one mark for explaining the basic method and second mark for a development of that. Depends on fieldwork but expect; We measured depth using a tape and metre rule (1) taking measurements at x sites upstream/downstream from our access point (1) We measured width using a tape (1) taking measurements at x sites upstream/downstream form our access point (1) We measured gradient using a clinometer, a tape and ranging poles (1) both upstream and downstream from our point of access (1) **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
9 (b)	Award one mark for a recognisable presentation of a graph e.g. a divided bar-graph or a line graph (1) a further mark for some recognisable labelling on the diagram; perhaps the axes (1) Two further marks for annotation explaining the choice as in; this allowed us to make a comparison (1) this showed variations from site to site, clearly (1) **Allow any other appropriate response**	**(4)**

Question number	Answer	Marks
9 (c)	Award **one** mark for identifying a basic reason explaining the value of a case study or a theory e.g. it helped to explain why the channel became wider in a downstream direction/it helped explain why flooding was more likely in the lower course (1) Allow three further marks for the details of that point as in; it allowed us to spot that our data was not exactly what was	**(4)** **(1) + (1+1+1)**

	predicted/expected (1) because at site 3 there was…. (1) this was explained by… (1) **Allow any other appropriate response**	

Question Number	Indicative content
9 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • There are several streams/rivers on the map to choose from in order to make a comparison • The area is an upland area with many steep slopes especially on the west side of the 'beck; flowing north to south • The larger river (River Swale) does appear to have a floodplain – centre south of the map at Sheepfold • The larger river is quite wide – twice the width of the road • There may be small areas of floodplain on the north-south flowing 'beck' • There are very few roads on the map – none at all to the north of Gunnerside • There are many footpaths and rights of way for access to all of the streams/rivers **AO4** • Safety should be a primary concern – the larger river (the Swale) is probably too wide and deep to take measurements safely although map evidence is not definitive • Time is also a limiting factor and with equipment to carry closeness to the hostel in Gunnerside is a factor • Legality of access should be considered and there are rights of way (footpaths and tracks) alongside the (Gunnerside) Beck flowing north to south which seem ideal • Those tracks are on both sides of the beck for about a kilometre north of the village at least • If sites are chosen (sampled) systematically then a decision neds to be taken about distances between those sites and how many

	sites should be selected to demonstrate downstream differences • Other small streams might be measured e.g. Shore Gill to allow a comparison especially is the basin size is very different as it would appear.

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Question number	Answer	Marks
10 (a)	Award one mark for the correct answer and one for the working(s) As in (1.5+1.2) – (-0.5 + - 1.0) = 2.7 - 1.5 -= **+1.2**	**(2)**

Question number	Answer	Marks
10 (b)	Award one mark each for following; They might have surveyed all the streets in these districts (1) if they had the time/resources/numbers (1) They might have sampled the streets (1) using an OS map to select (1) They might have listed the streets alphabetically and used random numbers (1) to select a sample **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
10 (c)	Award one mark for basic point about secondary data and a further mark for the development of how it might have been used. They used census information to select the areas to select contrasting areas of the city (1) so that it could be compared with the primary data (1) They used the IMD data base to select contrasting areas of the city (1) so that it could be compared with the primary data (1) Do **not** award a mark for the simple identification of a legitimate secondary data source **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
10 (d)	Award one mark for basic reason/evidence for the conclusion and a further mark for the development of that point to support, perhaps through data For two elements there is a contrast between the averages (1) between 2 and 3 for graffiti and litter (1) Major difference for traffic noise (1) although in this case worse in Lower Walton unlike the other measures (1) Range of street results quite similar (1) but obviously overall averages show that relatively few streets in Westgate have positive scores unlike Lower Walton (1) **Allow any other appropriate response**	**(4)** (1+1) + (1+1)

Question Number	Indicative content
10 (e)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Assessment should include both strengths and weaknesses which are clearly distinguished. • Strengths might be both pragmatic – ease of collecting data and academic – sourcing useful information to answer/address a hypothesis/question. • Weaknesses might also be either pragmatic and/or academic • Academic weaknesses likely to address both issues of both accuracy and reliability • Accuracy might be explored through the quality of equipment used. • Accuracy might be explored through the care and attention taken by the students. • Reliability might be explored in terms of how typical the day was when primary data was collected. • Reliability might be explored through the quality of sampling in the selection of sites **AO4** • Should include references to methods of primary data collection with clear focus on variations in quality of life either from place to place and/or from person to person or group top group to illustrate both strengths and weaknesses • Should have clear focus on at least one hypothesis and/or testable question

	• Should include references to primary data gathered focussing on factors that might influence quality of life. • Should include clear references to strengths in terms of practicality – time/resources/numbers • Should include clear commentary about problems of data collection that might impact on accuracy and reliability e.g. numbers of responses. • Should address issues of objectivity/subjectivity especially concerning Environmental Quality Surveys • Should address sampling issues both in terms of places and also people • May come to a view

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	Award one mark for the correct answer and one for the working(s) As in (1.5+1.2) – (-0.5 + - 1.0) = 2.7 - 1.5 -= **+1.2**	**(2)**

Question number	Answer	Marks
11 (b)	Award one mark each for following; They might have surveyed all the streets in these districts (1) if they had the time/resources/numbers (1) They might have sampled the streets (1) using an OS map to select (1) They might have listed the streets alphabetically and used random numbers (1) to select a sample **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
11 (c)	Award one mark for basic point about secondary data and a further mark for the development of how it might have been used. They used census information to select the areas to select contrasting areas of the city (1) so that it could be compared with the primary data (1) They used the IMD data base to select contrasting areas of the city (1) so that it could be compared with the primary data (1) Do **not** award a mark for the simple identification of a legitimate secondary data source **Allow any other appropriate response**	**(2)**

Question number	Answer	Marks
11 (d)	Award one mark for basic reason/evidence for the conclusion and a further mark for the development of that point to support, perhaps through data For two elements there is a contrast between the averages (1) between 2 and 3 for graffiti and litter (1) Major difference for traffic noise (1) although in this case worse in Winterbourne Abbott unlike the other measures (1) Range of street results quite similar (1) but obviously overall averages show that relatively few streets in Lower Withering have positive scores unlike Winterbourne Abbott (1) **Allow any other appropriate response**	**(4)** (1+1) + (1+1)

Question Number	Indicative content
11 (e)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Assessment should include both strengths and weaknesses which are clearly distinguished. • Strengths might be both pragmatic – ease of collecting data and academic – sourcing useful information to answer/address a hypothesis/question. • Weaknesses might also be either pragmatic and/or academic • Academic weaknesses likely to address both issues of both accuracy and reliability • Accuracy might be explored through the quality of equipment used. • Accuracy might be explored through the care and attention taken by the students. • Reliability might be explored in terms of how typical the day was when primary data was collected. • Reliability might be explored through the quality of sampling in the selection of sites **AO4** • Should include references to methods of primary data collection with clear focus on variations in quality of life either from place to

	place and/or from person to person or group top group to illustrate both strengths and weaknesses • Should have clear focus on at least one hypothesis and/or testable question • Should include references to primary data gathered focussing on factors that might influence quality of life. • Should include clear references to strengths in terms of practicality – time/resources/numbers • Should include clear commentary about problems of data collection that might impact on accuracy and reliability e.g. numbers of responses. • Should address issues of objectivity/subjectivity especially concerning Environmental Quality Surveys • Should address sampling issues both in terms of places and also people • May come to a view

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Wednesday 3 June 2020

Morning (Time: 1 hour 30 minutes) | Paper Reference **1GB0/02**

Geography B

Paper 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1 which is a photograph of a landscape in Cumbria, northern England.



Figure 1

(a) Identify which **one** of the following is the best description of the distribution of woodland.

(1)

☒ **A** It is found only on the highest ground

☒ **B** It is mostly on steep valley slopes

☒ **C** It is mostly on flatter ground

☒ **D** It is found in all areas

DO NOT WRITE IN THIS AREA
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(b) Identify which **one** of the following is a region of the UK dominated by igneous rocks.

(1)

- ☒ **A** The south-east of England
- ☒ **B** The north-west of Scotland
- ☒ **C** The east of England
- ☒ **D** The south of Wales

(c) Explain **one** characteristic of sedimentary rocks.

(2)

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(Total for Question 1 = 4 marks)

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Coastal Change and Conflict

2 (a) Study Figure 2 which shows a part of the coastline of Aberdeenshire, Scotland.



Figure 2

(i) Identify **one** type of hard engineering used to protect this coastline.

(1)

.....

(ii) Identify which **one** of the following is most likely to result in rapid coastal erosion.

(1)

- ☒ **A** Low wave energy and easily eroded rocks
- ☒ **B** High wave energy and easily eroded rocks
- ☒ **C** Low wave energy and resistant rocks
- ☒ **D** High wave energy and resistant rocks

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(iii) Explain **one** way in which hard engineering can reduce coastal erosion.

(2)

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(b) Explain **one** reason why some coastlines are protected whilst others are not.

(4)

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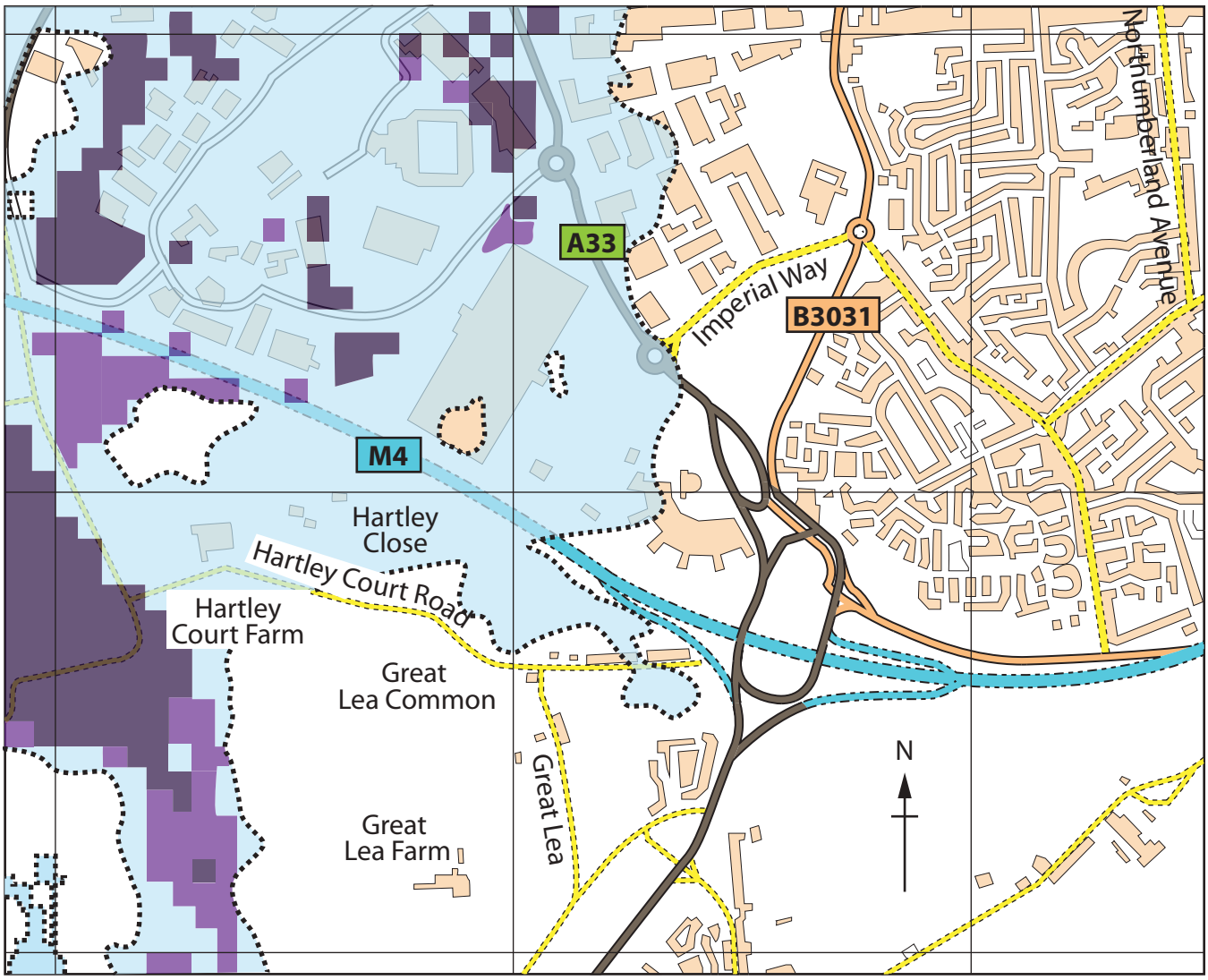
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(Total for Question 2 = 8 marks)

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3 Study Figure 3 which is a flood risk map for part of Reading, Berkshire.



Key

Risk of flooding from rivers and sea

High-risk area
The chance of flooding from rivers or the sea in this area is greater than once every 30 years (>3.3%)

Medium-risk area
The chance of flooding from rivers or the sea in this area is between once every 100 and 30 years (1–3.3%)

Low-risk area
The chance of flooding from rivers or the sea in this area is between once every 1000 and 100 years (0.1–1%)

Figure 3

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(a) Identify which **one** of the following is the best description of the flood risk in this part of Reading.

(1)

- ☒ **A** The north-east area of the map has many areas at risk
- ☒ **B** The western half of the map has most of the flood-risk areas
- ☒ **C** The B3031 will often be closed because of flooding
- ☒ **D** There are more high-risk areas than low-risk areas

(b) Explain **one** way in which human activity can increase the risk of river flooding.

(2)

(c) Explain how both the processes of erosion and deposition create river meanders.

You may use a diagram to help your answer.

(4)

(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 4 which shows selected glaciated and unglaciated landscapes in the UK.



Marshy lowlands and rounded hills with poor soil and much exposed rock



U-shaped valley with long ribbon lake – almost no soil and much exposed shattered rock



A cirque and arête in a mountainous region with much exposed and shattered rock



Cliffs made from boulder clay and very easily eroded



The lower course of a river flooded by sea-level rise in the last 10,000 years



Chalk downs with dry valleys and very little surface drainage

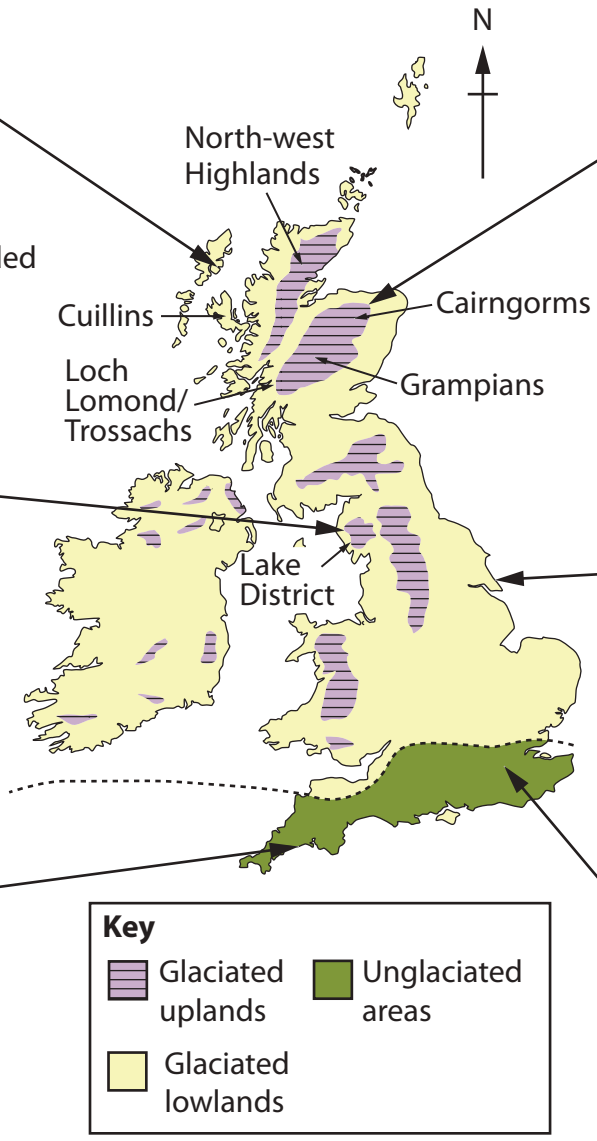


Figure 4

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Assess the varied impact of glaciation on the landscape of the United Kingdom.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

5 (a) Study Figure 5 which shows the views of some residents in a rural community in north-west Wales who have been asked to comment on the impact of English migrants.

'A lot of English people with children have moved into the village and have bought the houses. It keeps the school going.'

'A lot of English people moved in and are doing very well financially… if they didn't, the place would die. They bring money with them and pay taxes.'

'Affluent English people, especially of retirement age, have pushed up house prices, making them too expensive for local people.'

'These people are ruining the Welsh identity and killing the Welsh language.'

Figure 5

(i) Identify which **one** of the following is a positive impact of English migrants on the local community.

(1)

☒ **A** Houses too expensive for locals

☒ **B** Protection of the Welsh language

☒ **C** Keeping the school open

☒ **D** Ruining Welsh identity

(ii) State **two** reasons why some people retire to rural areas in the UK.

(2)

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(b) Explain **two** reasons why transnational corporations (TNCs) have become more important to the UK economy.

(4)

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(Total for Question 5 = 7 marks)

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Dynamic UK Cities

6 (a) Study Figure 6 which shows a suburban high street before and after urban regeneration.



Figure 6

(i) Identify which **one** of the following is the most obvious change to this suburban high street.

(1)

- ☒ **A** The buildings have been extended upwards
- ☒ **B** There are fewer shops and offices
- ☒ **C** Most of the buildings have been painted
- ☒ **D** There are more houses

(ii) Identify **one** piece of evidence that this is a high street in the suburbs rather than in a city centre.

(1)

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(iii) Explain **one** strategy for making urban living more sustainable.

(2)

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(b) For a UK city that you have studied, explain **one** negative impact and **one** positive impact of regeneration on local people.

(4)

UK city .....

Negative impact

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Positive impact

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(c) For a UK city that you have studied, explain the differences between the land use in the central business district (CBD) and in the urban–rural fringe.

(4)

UK city .....

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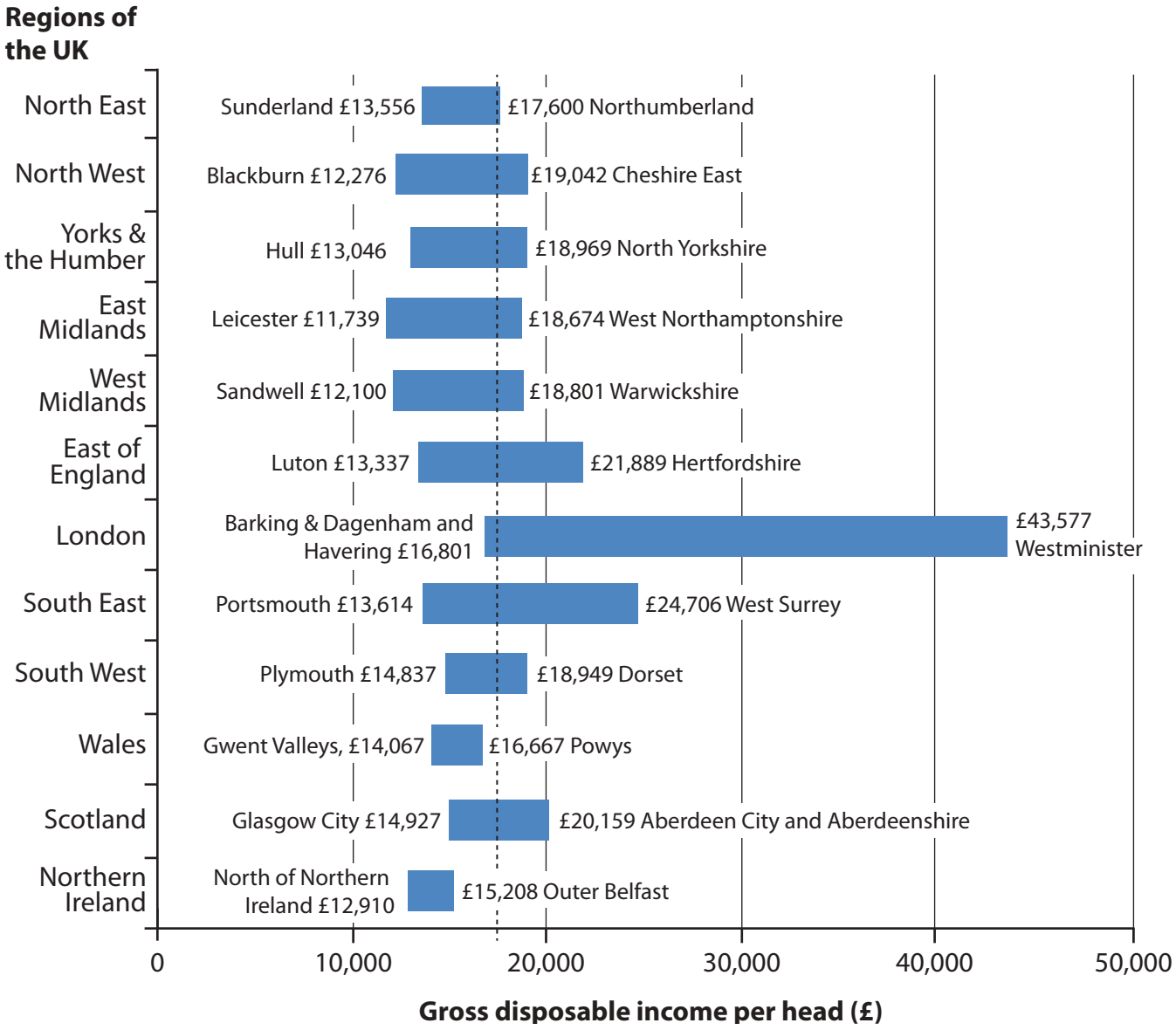
(Total for Question 6 = 12 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

7 (a) Analyse the information in Figure 7 which shows variations in gross disposable income (GDI) per head in 2017, between UK regions and within those regions.



- Gross disposable income (GDI) per head is the amount of money people have to spend or save per year after they have paid their taxes and/or received any benefits.
- The UK mean GDI per head is just over £17,000 (the vertical dotted line).
- The data shows the range of GDI per head values between UK regions.
- The data also shows the range of GDI per head in each of the regions (e.g. Sunderland has the lowest mean GDI per head and Northumberland has the highest mean GDI per head in the North East).

Figure 7

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Assess the possible impacts of these variations in gross disposable income (GDI) per head.

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

If you answer Question 8 put a cross in the box ☒ .

Coastal Change and Conflict

8 You have carried out your own fieldwork investigating the impact of coastal management on coastal processes and communities.

Name your coastal fieldwork location:

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(a) Explain **one** method that you used to collect your primary data.

(2)

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(b) Using an annotated diagram, explain how you used a graph to present your fieldwork data.

(4)

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(c) Explain how geographical case studies and theories helped in the analysis of your data.

(4)

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(d) In 2018 a group of 20 students stayed in a hostel in New Quay/Ceinewydd, west Wales, for two days to carry out their fieldwork into the impact of coastal management on coastal processes.

They decided to measure beach profiles at two contrasting locations to investigate whether coastal management affected beach gradients.

They used the 1:25,000 OS map below (Figure 8) to choose the two contrasting locations for their data collection.



Figure 8

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Assess the factors that the students should have considered when selecting their two contrasting locations.

You must use evidence from Figure 8 to support your answer.

(8)

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(Total for Question 8 = 18 marks)

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Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 You have carried out your own fieldwork investigating the influence of drainage basin and channel characteristics on flood risk.

Name your river fieldwork location:

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(a) Explain **one** method that you used to collect your primary data.

(2)

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(b) Using an annotated diagram, explain how you used a graph to present your fieldwork data.

(4)

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(c) Explain how geographical case studies and theories helped in the analysis of your data.

(4)

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(d) In 2018 a group of 20 students stayed in a hostel in Gunnerside, North Yorkshire, for two days to carry out their fieldwork into the impact of drainage basin and channel characteristics on flood risk.

They decided to measure channel characteristics at two contrasting locations to investigate the impact of channel characteristics on flood risk.

They used the 1:25,000 OS map below (Figure 9) to choose the two contrasting locations for their data collection.

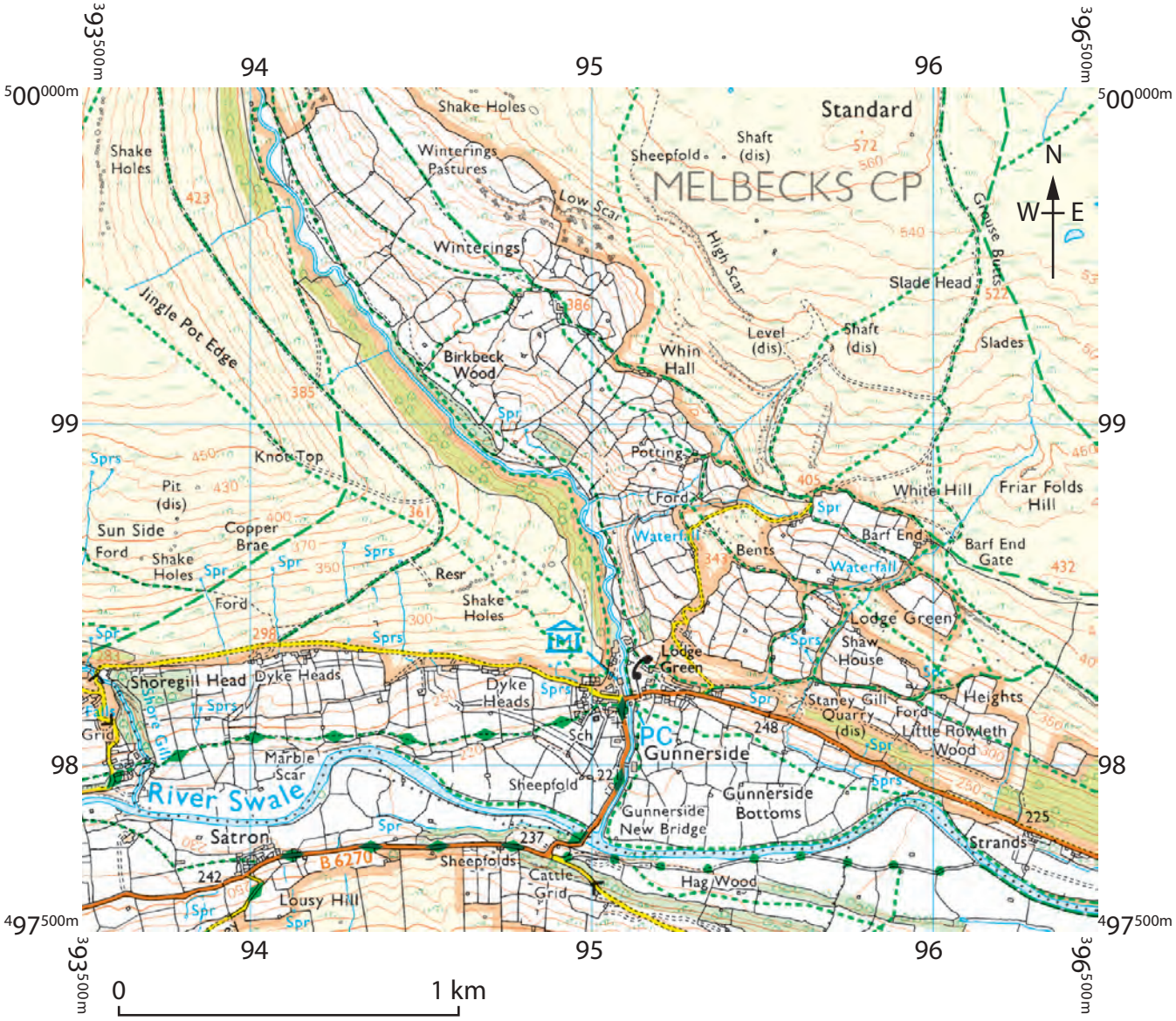


Figure 9

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Assess the factors that the students should have considered when selecting their two contrasting locations.

You must use evidence from Figure 9 to support your answer.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.

If you answer Question 10 put a cross in the box ☒ .

Investigating Dynamic Urban Areas

10 A group of 20 students carried out fieldwork investigating environmental quality in two contrasting urban areas.

They conducted an environmental quality survey in 10 streets in each area.

They assessed the levels of graffiti, traffic noise, litter and pavement quality on a scale of +2 to −2 for each factor, with +2 indicating a very positive view and −2 indicating a very negative view.

Their results are shown below.

	Westgate – an inner-city suburb dominated by terraced housing built in the 19th century		**Lower Walton – a suburb on the urban fringe dominated by detached housing built in the 1980s**	
Factor	**Mean score for the 10 streets**	**Range of scores across the 10 streets**	**Mean score for the 10 streets**	**Range of scores across the 10 streets**
Graffiti	−1.3	−1 to −2	+1.5	+2 to −1
Traffic noise	+1.4	+2 to −1	−0.5	+1 to −2
Litter	−1.8	+1 to −2	+1.2	+2 to −1
Pavement quality	−1.1	+2 to −2	−1.0	+2 to −2
Total score (range +8 to −8)	−2.8		?	

Figure 10

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(a) Calculate the 'Total score' for Lower Walton.

(2)

You must show your working.

Total score = ...

(b) Explain **one** method that the students might have used to select the streets that they surveyed.

(2)

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(c) Suggest **one** way in which secondary data might have been used in this investigation.

(2)

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(d) Suggest **two** reasons why the students concluded that Westgate and Lower Walton had more differences than similarities.

(4)

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(e) You have conducted your own fieldwork into the reasons why the quality of life varies within an urban area.

Assess the strengths and weaknesses of the methods that you used to collect your primary data.

(8)

Named urban area: .....

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(Total for Question 10 = 18 marks)

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Do not answer Question 11 if you have answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 A group of 20 students carried out fieldwork investigating environmental quality in two contrasting rural areas.

They conducted an environmental quality survey in 10 streets in each village.

They assessed the levels of graffiti, traffic noise, litter and pavement quality on a scale of +2 to −2 for each factor, with +2 indicating a very positive view and −2 indicating a very negative view.

Their results are shown below.

	Lower Withering – a remote village that was once a coal mining community		**Winterbourne Abbott – a village within commuting distance of a major city**	
Factor	**Mean score for the 10 streets**	**Range of scores across the 10 streets**	**Mean score for the 10 streets**	**Range of scores across the 10 streets**
Graffiti	−1.3	−1 to −2	+1.5	+2 to −1
Traffic noise	+1.4	+2 to −1	−0.5	+1 to −2
Litter	−1.8	+1 to −2	+1.2	+2 to −1
Pavement quality	−1.1	+2 to −2	−1.0	+2 to −2
Total score (range +8 to −8)	−2.8		?	

Figure 11

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(a) Calculate the 'Total score' for Winterbourne Abbott.

(2)

You must show your working.

Total score = ...

(b) Explain **one** method that the students might have used to select the streets that they surveyed.

(2)

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(c) Suggest **one** way in which secondary data might have been used in this investigation.

(2)

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(d) Suggest **two** reasons why the students concluded that Lower Withering and Winterbourne Abbott had more differences than similarities.

(4)

1 .....

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2 .....

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(e) You have conducted your own fieldwork into the reasons why deprivation varies within rural areas.

Assess the strengths and weaknesses of the methods that you used to collect your primary data.

(8)

Named rural area: .....

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Acknowledgements

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Figure 2 © Kenslens Photography/Alamy

Figure 4 adapted from: https://www.pietsmulders.nl/engeland_glaciated-upland-landscapes.html with © MJB Photography/Getty Images, © Peter Barritt/Alamy,© Ivan/Getty Images, © Tony Waltham/Robertharding/Getty Images, © FLPA/Angela Hampton/Getty Images

Figure 6 Photographer 'Morley von Sternberg' for the 'after image' and Jan Kattein Architects for the 'before image'

Figure 8 and 9 © Crown Copyright 2016

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Wednesday 3 June 2020

Morning (Time: 1 hour 30 minutes) | Paper Reference **1GB0/02**

Geography B

Paper 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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P 6 2 0 1 3 A 0 1 4 0

Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1 which is a photograph of a landscape in Cumbria, northern England.



Figure 1

(a) Identify which **one** of the following is the best description of the distribution of woodland.

(1)

☒ **A** It is found only on the highest ground

☒ **B** It is mostly on steep valley slopes

☒ **C** It is mostly on flatter ground

☒ **D** It is found in all areas

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DO NOT WRITE IN THIS AREA

(b) Identify which **one** of the following is a region of the UK dominated by igneous rocks.

(1)

- ☒ **A** The south-east of England
- ☒ **B** The north-west of Scotland
- ☒ **C** The east of England
- ☒ **D** The south of Wales

(c) Explain **one** characteristic of sedimentary rocks.

(2)

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(Total for Question 1 = 4 marks)

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Coastal Change and Conflict

2 (a) Study Figure 2 which shows a part of the coastline of Aberdeenshire, Scotland.



Figure 2

(i) Identify **one** type of hard engineering used to protect this coastline.

(1)

.....

(ii) Identify which **one** of the following is most likely to result in rapid coastal erosion.

(1)

- ☒ **A** Low wave energy and easily eroded rocks
- ☒ **B** High wave energy and easily eroded rocks
- ☒ **C** Low wave energy and resistant rocks
- ☒ **D** High wave energy and resistant rocks

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(iii) Explain **one** way in which hard engineering can reduce coastal erosion.

(2)

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(b) Explain **one** reason why some coastlines are protected whilst others are not.

(4)

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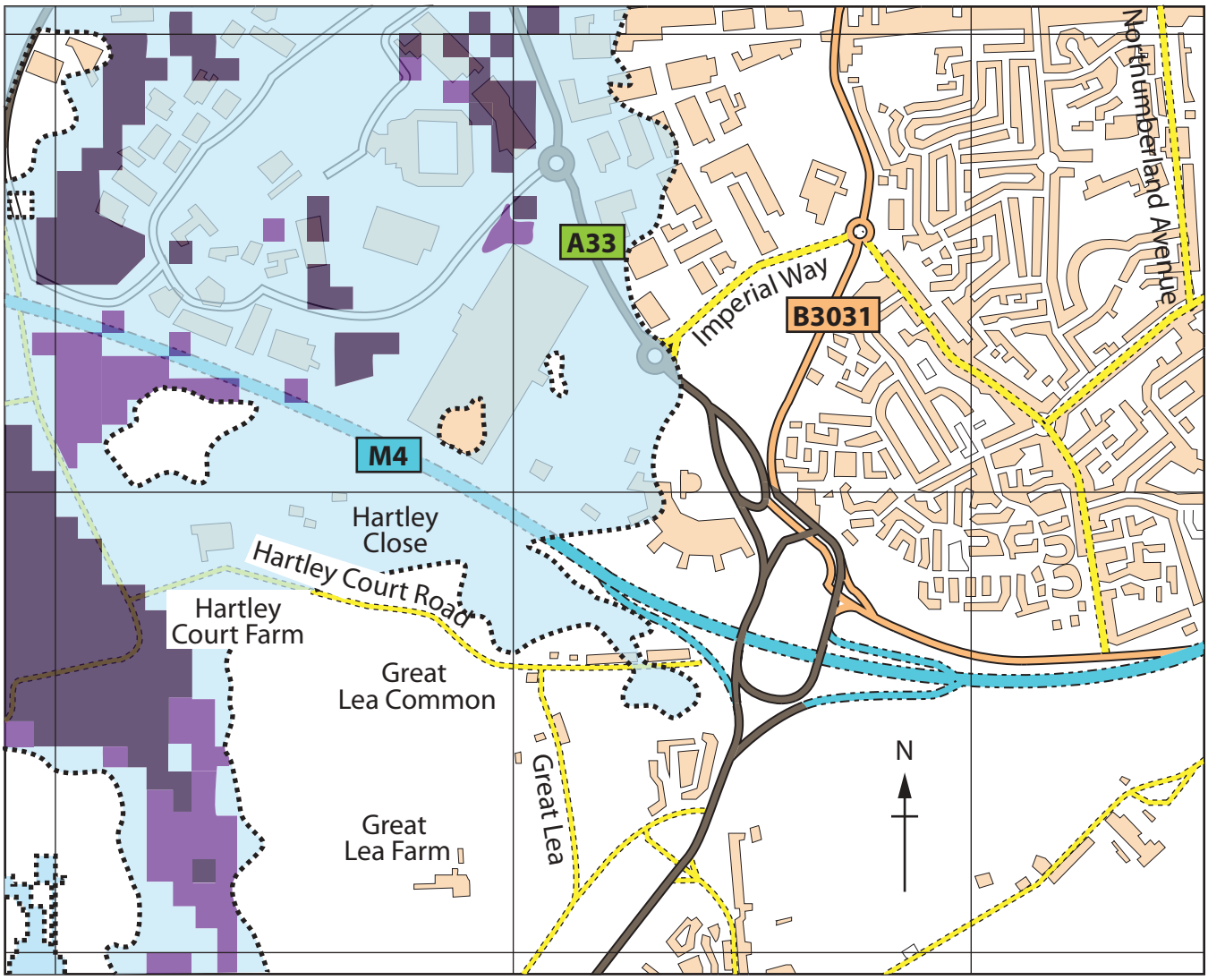
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(Total for Question 2 = 8 marks)

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3 Study Figure 3 which is a flood risk map for part of Reading, Berkshire.



Key

Risk of flooding from rivers and sea

High-risk area
The chance of flooding from rivers or the sea in this area is greater than once every 30 years (>3.3%)

Medium-risk area
The chance of flooding from rivers or the sea in this area is between once every 100 and 30 years (1–3.3%)

Low-risk area
The chance of flooding from rivers or the sea in this area is between once every 1000 and 100 years (0.1–1%)

Figure 3

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(a) Identify which **one** of the following is the best description of the flood risk in this part of Reading.

(1)

- ☒ **A** The north-east area of the map has many areas at risk
- ☒ **B** The western half of the map has most of the flood-risk areas
- ☒ **C** The B3031 will often be closed because of flooding
- ☒ **D** There are more high-risk areas than low-risk areas

(b) Explain **one** way in which human activity can increase the risk of river flooding.

(2)

(c) Explain how both the processes of erosion and deposition create river meanders.

You may use a diagram to help your answer.

(4)

(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 4 which shows selected glaciated and unglaciated landscapes in the UK.



Marshy lowlands and rounded hills with poor soil and much exposed rock



U-shaped valley with long ribbon lake – almost no soil and much exposed shattered rock



A cirque and arête in a mountainous region with much exposed and shattered rock



Cliffs made from boulder clay and very easily eroded



The lower course of a river flooded by sea-level rise in the last 10,000 years



Chalk downs with dry valleys and very little surface drainage

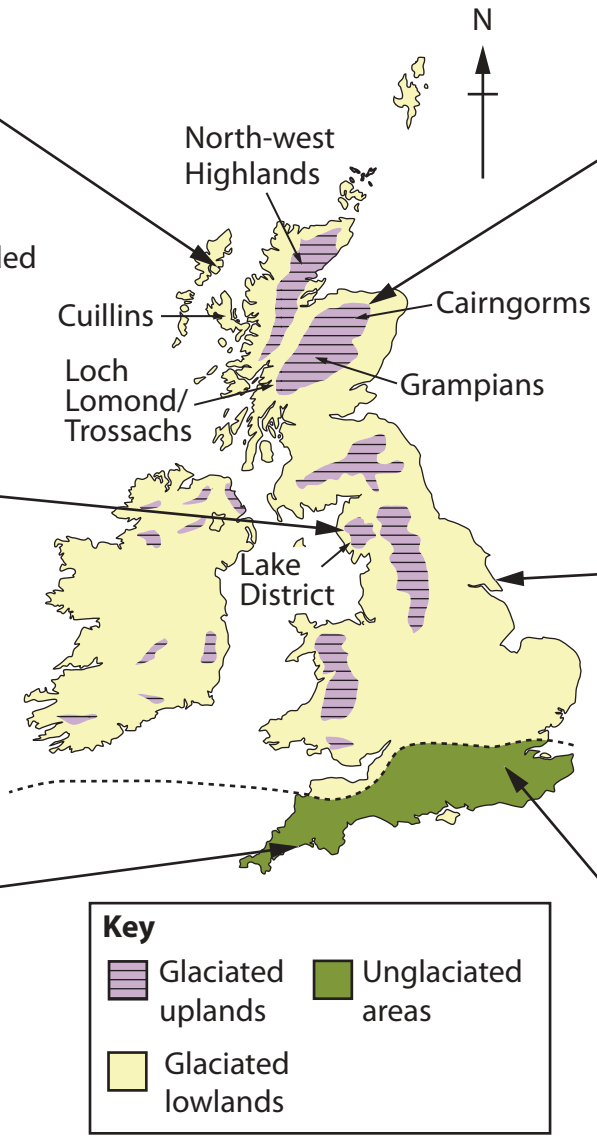


Figure 4

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Assess the varied impact of glaciation on the landscape of the United Kingdom.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

5 (a) Study Figure 5 which shows the views of some residents in a rural community in north-west Wales who have been asked to comment on the impact of English migrants.

'A lot of English people with children have moved into the village and have bought the houses. It keeps the school going.'

'A lot of English people moved in and are doing very well financially… if they didn't, the place would die. They bring money with them and pay taxes.'

'Affluent English people, especially of retirement age, have pushed up house prices, making them too expensive for local people.'

'These people are ruining the Welsh identity and killing the Welsh language.'

Figure 5

(i) Identify which **one** of the following is a positive impact of English migrants on the local community.

(1)

☒ **A** Houses too expensive for locals

☒ **B** Protection of the Welsh language

☒ **C** Keeping the school open

☒ **D** Ruining Welsh identity

(ii) State **two** reasons why some people retire to rural areas in the UK.

(2)

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(b) Explain **two** reasons why transnational corporations (TNCs) have become more important to the UK economy.

(4)

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(Total for Question 5 = 7 marks)

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Dynamic UK Cities

6 (a) Study Figure 6 which shows a suburban high street before and after urban regeneration.



Figure 6

(i) Identify which **one** of the following is the most obvious change to this suburban high street.

(1)

- ☒ **A** The buildings have been extended upwards
- ☒ **B** There are fewer shops and offices
- ☒ **C** Most of the buildings have been painted
- ☒ **D** There are more houses

(ii) Identify **one** piece of evidence that this is a high street in the suburbs rather than in a city centre.

(1)

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(iii) Explain **one** strategy for making urban living more sustainable.

(2)

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(b) For a UK city that you have studied, explain **one** negative impact and **one** positive impact of regeneration on local people.

(4)

UK city .....

Negative impact

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Positive impact

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(c) For a UK city that you have studied, explain the differences between the land use in the central business district (CBD) and in the urban–rural fringe.

(4)

UK city .....

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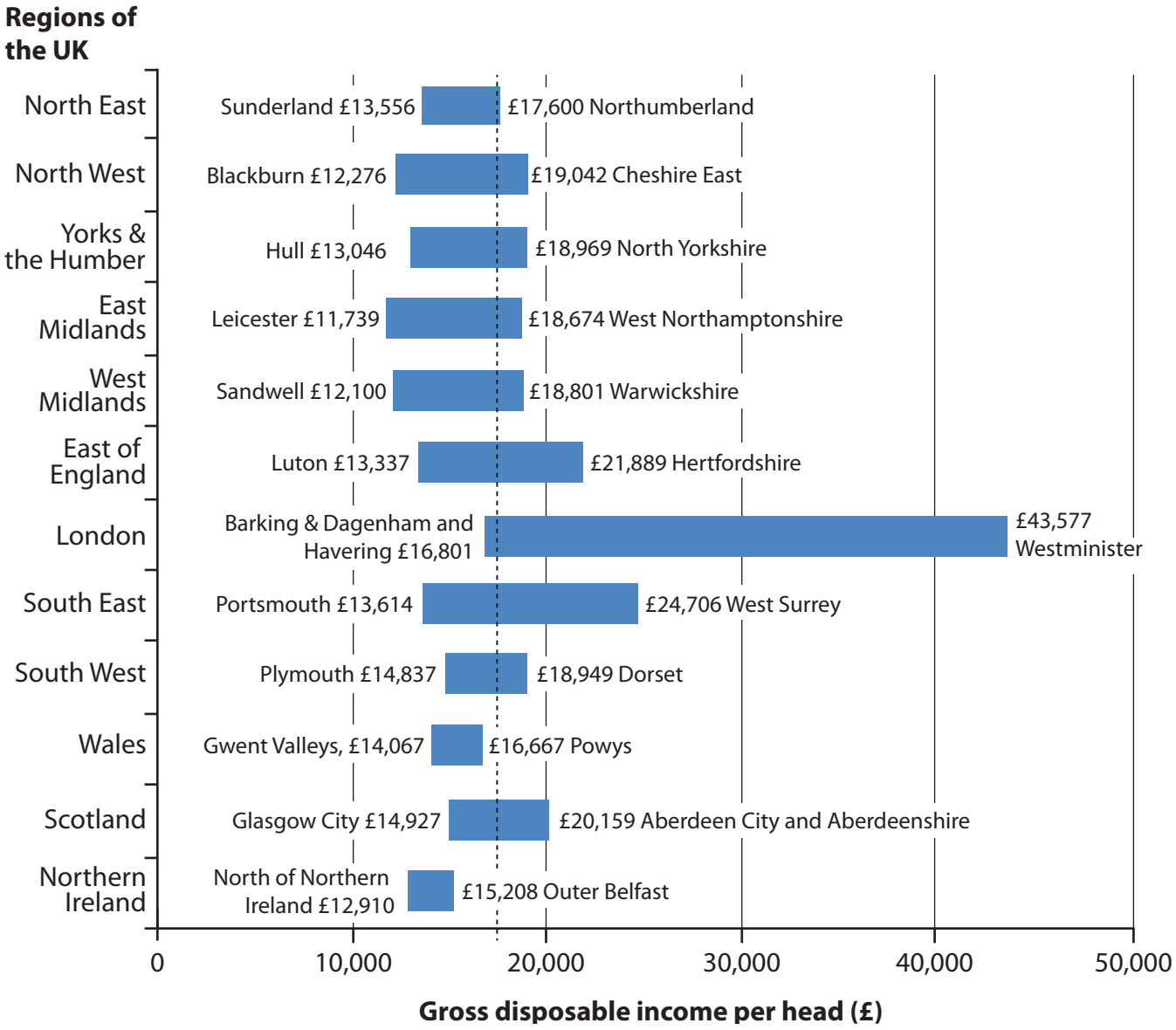
(Total for Question 6 = 12 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

7 (a) Analyse the information in Figure 7 which shows variations in gross disposable income (GDI) per head in 2017, between UK regions and within those regions.



- Gross disposable income (GDI) per head is the amount of money people have to spend or save per year after they have paid their taxes and/or received any benefits.
- The UK mean GDI per head is just over £17,000 (the vertical dotted line).
- The data shows the range of GDI per head values between UK regions.
- The data also shows the range of GDI per head in each of the regions (e.g. Sunderland has the lowest mean GDI per head and Northumberland has the highest mean GDI per head in the North East).

Figure 7

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Assess the possible impacts of these variations in gross disposable income (GDI) per head.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

If you answer Question 8 put a cross in the box ☒ .

Coastal Change and Conflict

8 You have carried out your own fieldwork investigating the impact of coastal management on coastal processes and communities.

Name your coastal fieldwork location:

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(a) Explain **one** method that you used to collect your primary data.

(2)

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(b) Using an annotated diagram, explain how you used a graph to present your fieldwork data.

(4)

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(c) Explain how geographical case studies and theories helped in the analysis of your data.

(4)

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(d) In 2018 a group of 20 students stayed in a hostel in New Quay/Ceinewydd, west Wales, for two days to carry out their fieldwork into the impact of coastal management on coastal processes.

They decided to measure beach profiles at two contrasting locations to investigate whether coastal management affected beach gradients.

They used the 1:25,000 OS map below (Figure 8) to choose the two contrasting locations for their data collection.



Figure 8

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Assess the factors that the students should have considered when selecting their two contrasting locations.

You must use evidence from Figure 8 to support your answer.

(8)

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(Total for Question 8 = 18 marks)

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Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 You have carried out your own fieldwork investigating the influence of drainage basin and channel characteristics on flood risk.

Name your river fieldwork location:

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(a) Explain **one** method that you used to collect your primary data.

(2)

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(b) Using an annotated diagram, explain how you used a graph to present your fieldwork data.

(4)

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(c) Explain how geographical case studies and theories helped in the analysis of your data.

(4)

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(d) In 2018 a group of 20 students stayed in a hostel in Gunnerside, North Yorkshire, for two days to carry out their fieldwork into the impact of drainage basin and channel characteristics on flood risk.

They decided to measure channel characteristics at two contrasting locations to investigate the impact of channel characteristics on flood risk.

They used the 1:25,000 OS map below (Figure 9) to choose the two contrasting locations for their data collection.

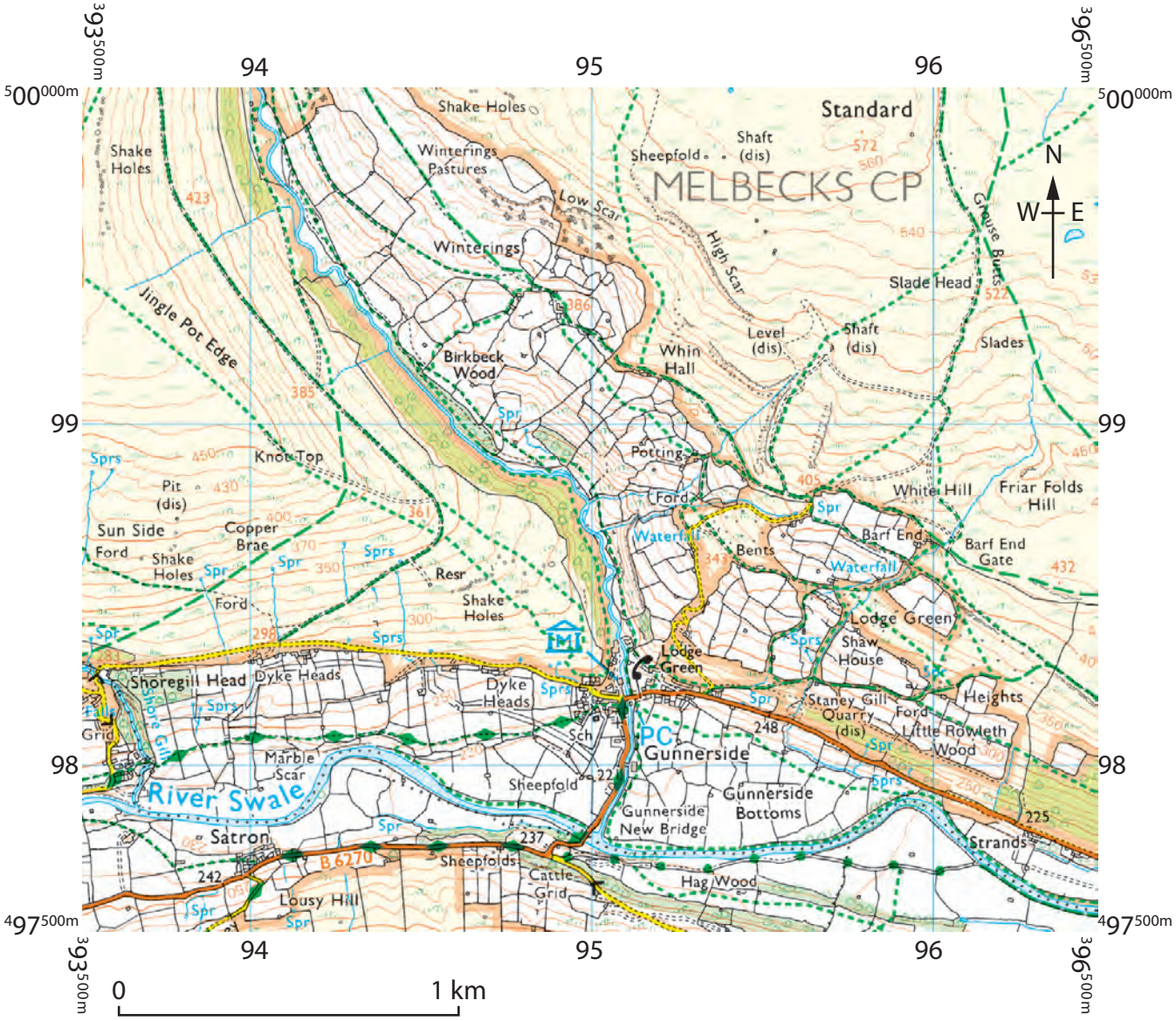


Figure 9

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Assess the factors that the students should have considered when selecting their two contrasting locations.

You must use evidence from Figure 9 to support your answer.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.

If you answer Question 10 put a cross in the box ☒ .

Investigating Dynamic Urban Areas

10 A group of 20 students carried out fieldwork investigating environmental quality in two contrasting urban areas.

They conducted an environmental quality survey in 10 streets in each area.

They assessed the levels of graffiti, traffic noise, litter and pavement quality on a scale of +2 to −2 for each factor, with +2 indicating a very positive view and −2 indicating a very negative view.

Their results are shown below.

	Westgate – an inner-city suburb dominated by terraced housing built in the 19th century		**Lower Walton – a suburb on the urban fringe dominated by detached housing built in the 1980s**	
Factor	**Mean score for the 10 streets**	**Range of scores across the 10 streets**	**Mean score for the 10 streets**	**Range of scores across the 10 streets**
Graffiti	−1.3	−1 to −2	+1.5	+2 to −1
Traffic noise	+1.4	+2 to −1	−0.5	+1 to −2
Litter	−1.8	+1 to −2	+1.2	+2 to −1
Pavement quality	−1.1	+2 to −2	−1.0	+2 to −2
Total score (range +8 to −8)	−2.8		?	

Figure 10

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(a) Calculate the 'Total score' for Lower Walton.

(2)

You must show your working.

Total score = ...

(b) Explain **one** method that the students might have used to select the streets that they surveyed.

(2)

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(c) Suggest **one** way in which secondary data might have been used in this investigation.

(2)

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(d) Suggest **two** reasons why the students concluded that Westgate and Lower Walton had more differences than similarities.

(4)

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(e) You have conducted your own fieldwork into the reasons why the quality of life varies within an urban area.

Assess the strengths and weaknesses of the methods that you used to collect your primary data.

(8)

Named urban area: .....

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(Total for Question 10 = 18 marks)

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Do not answer Question 11 if you have answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 A group of 20 students carried out fieldwork investigating environmental quality in two contrasting rural areas.

They conducted an environmental quality survey in 10 streets in each village.

They assessed the levels of graffiti, traffic noise, litter and pavement quality on a scale of +2 to −2 for each factor, with +2 indicating a very positive view and −2 indicating a very negative view.

Their results are shown below.

	Lower Withering – a remote village that was once a coal mining community		**Winterbourne Abbott – a village within commuting distance of a major city**	
Factor	**Mean score for the 10 streets**	**Range of scores across the 10 streets**	**Mean score for the 10 streets**	**Range of scores across the 10 streets**
Graffiti	−1.3	−1 to −2	+1.5	+2 to −1
Traffic noise	+1.4	+2 to −1	−0.5	+1 to −2
Litter	−1.8	+1 to −2	+1.2	+2 to −1
Pavement quality	−1.1	+2 to −2	−1.0	+2 to −2
Total score (range +8 to −8)	−2.8		?	

Figure 11

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(a) Calculate the 'Total score' for Winterbourne Abbott.

(2)

You must show your working.

Total score = ...

(b) Explain **one** method that the students might have used to select the streets that they surveyed.

(2)

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.....

(c) Suggest **one** way in which secondary data might have been used in this investigation.

(2)

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(d) Suggest **two** reasons why the students concluded that Lower Withering and Winterbourne Abbott had more differences than similarities.

(4)

1 .....

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2 .....

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(e) You have conducted your own fieldwork into the reasons why deprivation varies within rural areas.

Assess the strengths and weaknesses of the methods that you used to collect your primary data.

(8)

Named rural area: .....

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Acknowledgements

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Figure 2 © Kenslens Photography/Alamy

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Mark Scheme (Results)

November 2021

Pearson Edexcel GCSE B in

Geography (1GB0)

Paper 02 - UK Geographical Issues

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Paper 2 Mark Scheme – 1GB02 (2021)

Question	Answer	Marks
1(a)	C – Chalk All other answers clearly mistaken – see diagram Figure 1	(1)

Question	Answer	Marks
1(b)	C – the breakdown or dissolving of rocks on the surface All other answers clearly and demonstrably wrong	(1)

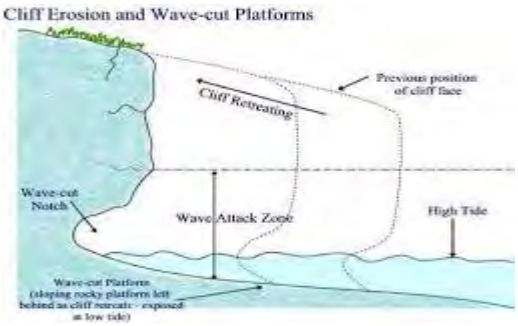
Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate characteristic that makes sedimentary rock more readily erodible or why igneous rock is more resistant and a further mark for an extension/development of that idea. Not as hard (1) because more compressed (1) More bedding planes/joints (1) so more access for water etc. (1) Chemically less resistant to solution (1) for example chalk and limestone s (1) Accept any other appropriate response	(2)

Question	Answer	Marks
2 (a) (i)	B – Yorkshire and Humberside All other answers clearly and demonstrably wrong	(1)

Question	Answer	Marks
2 (a) (ii)	6.6 x 11,154/100 = 736.16 so 736.2 *(km)* One mark for correct method – one for the result Allow 736.1	(2)

Question	Answer	Marks
2(a) (iii)	Award one mark for identifying an appropriate reason why a small percentage of Scottish coastline is protected and a further mark for a legitimate development of that point. Much of the coastline is made up of hard, resistant rocks (1) so erosion rates are very low without protection (1) Much of the coastline is experiencing uplift (1) so it is advancing and not retreating (1) Much of the coastline is very lightly populated (1) making protection expensive and pointless (1)	(2)

	There is a great deal of coastline to protect (1) so only a small proportion is likely to need and/or warrant protection Accept any other appropriate response	

Question	Answer	Marks
2(b)	Award one mark for an appropriate basic explanation of coastal erosion creating cliffs (1) and a further 3 marks for its development (1) Waves erode the coastline with hydraulic energy and abrasion (1) exploiting weaknesses in the lithology/structure of the rocks (1) leading to the undercutting of the cliff (1) leading to rockfall and/or slumping due to gravity (1) development of cliffs and their retreat over time (1) these processes can be exacerbated by weathering (1) Diagram will be version of below:  Limit to three if sequence is not apparent Do not credit twice if diagram/text replicate each other Accept any other appropriate response	(4) (1) +(1+1+1)

Question	Answer	Marks
3 (a) (i)	D – a meander All other answers demonstrably wrong – see Figure 3	(1)

Question	Answers	Marks
3 (a) (ii)	Because it is higher than point X (1) evidence from contour line and/or spot height (1) Accept any other appropriate response	(2) 1+1

Question	Answer	Marks
3(b)	One mark for each basic reason (1) and a further mark for its development (1) Building on floodplains reduces infiltration because grass/farmland replaced by tarmac and/or concrete (1) and so more water reaches the river leading to peakier discharge (1) Removal of trees reduces the amount of water taken up by plant growth (1) which leads to more water reaching the river (1) Climate change has led to more extreme events which includes graeter storminess (1) which delivers more rain in shorter periods leading to flooding as ground becomes a saturated (1) Accept any other appropriate response	(4) (1+1) + (1+1)

Question	Indicative content
4	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • The general relationship is largely explained by the impact of altitude on climate and the thermal growing season • Exacerbated by poorer soils which are in many areas partly .. • ..a function of their glacial history as in the Highlands of Scotland and Wales • Lowland densities reflect soil fertility at a local level but also accessibility and human factors. • These last include the impact of the industrial revolution and accessibility • Coastlines are also important for a trading nation AO4 (4 marks) • There is a close relationship between topography and population density • In all the >600metre areas population density is very low – frequently between 0 and 0.2 per hectare • That is also true for some (100 – 600 metres) lower altitudes e.g. Dartmoor and Exmoor are clearly visible on the pop density map • However, the relationship is not so clear at low altitudes and certainly not at <100 metres • There are many low latitude areas with minimal relief that have low population density – examples are most obvious in East Anglia and Lincolnshire • Others have very high density

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Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
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Question number	Answer	Marks
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Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; It is easy to access (1) so saving time and/or allowing more time for fieldwork (1) The beach is wide (1) so transect should show variation (1) It has some areas that are protected by groynes and others not (1) allowing a comparison to be made (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (b)	Award one mark for a reasonable suggestion and a further mark for supporting evidence for that idea. They appear to be evenly spaced so it is a systematic sample (1) allowing for proper comparison (1) The beach is roughly the same width at all three locations (1) allowing a fair comparison of gradient and sediment (1) There are groynes at two locations but not Profile 1 (1) which allows a comparison to be made (1) They are in different locations relative to the groynes (1) which allows a proper comparison to be made (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (c)	Award one mark for identifying a basic problem and a further mark for its extension. The profile starts under a cliff (1) si it might be a dangerous environment form rockfall (1) The presence if cliffs is likely to change the beach profile (1) without management being an issue (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (d)	Award one mark for identifying a basic reason and a further mark for its extension. Not all of it appears to be of great value (1) with agricultural land above the cliffs at the western end (1) The beach is quite wide (1) so maybe coastal erosion is quite limited (1) There is a wave cut platform below the cliff at the western end of the map (1) suggesting that cliff erosion is reducing as the cliff retreats (1) The beach faces south east (1) so fetch is going to be small so wave heights will be low(er) (1) Some parts of the beach are already protected by groynes (1) which may be enough to reduce the risk of erosion (1) Allow any other appropriate response	(4) (1+1) + (1+1)

Question number	Answer	Marks
9 (a)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; It is easy to access (1) so saving time and/or allowing more time for fieldwork (1) The stream is accessed by a footpath (1) so no legal issues (1) The stream is quite narrow (1) allowing data to be gathered safely (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (b)	Award one mark for a reasonable suggestion and a further mark for supporting evidence for that idea. They appear to be evenly spaced so it is a systematic sample (1) allowing for proper comparison (1) There are tributaries (1) so there should be variations in the channel characteristics (1) They appears to be a floodplain at site 6 (1) which allows a proper assessment of flood risk (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (c)	Award one mark for identifying a basic weakness and a further mark for its extension. It is not on the main river measured (1) so cannot be relevant in downstream changes and flood risk (1) It doesn't appear to be on any river but in woodland (1) so not relevant to the study (1) It isn't on the footpath (1) so there are access issues (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (d)	Award one mark for identifying a basic reason and a further mark for its extension. Not all of it appears to be of great value (1) with agricultural land dominant (1) There are no settlements/houses in the valley itself (1) so flooding poses no risk to life/property (1) The river is flowing in a (relatively) deep valley (1) and/so the floodplain is very small (1) Flooding might be useful (1) bringing sediment onto the valley floor/floodplain (1) Allow any other appropriate response	(4) (1 + 1) + (1 + 1)

Question number	Answer	Marks
10 (a)	The candidates have a clear steer to the types of data collected – '…..they measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.' They are not told how this data was selected or measured. They selected sites by sampling (allow any coherent explanation of sampling (1) and at each site selected they measured the amount of litter (allow any variable) on a scale of (allow any legitimate scale (1) They designed a questionnaire for the local inhabitants asking them to evaluate the quality of their environment perhaps using a Lickert scale (1) which would enable a comparison to be made of the two areas (1) Allow any other appropriate response	(2)

Question Number	Indicative content
10 (b)	AO3 (4 marks) / AO4 (4 marks) AO3 • Census data is old -2011 so may not be reliable • Evidence suggests that Area A is changing (graduates etc) – maybe both studentification and gentrification • Presence of university supports above idea(s) as does number of 'professionals' • Many inner cities have changed in recent years and 9/10 years since Census data released • We have no idea about the quality of the four-bed houses • Many inner city houses large terraced houses maybe subdivided • Conclusion is not reliable – 'always' an obvious problem • Causation not tested = better environment because…. • Plausible that better environments attract better off people • Only certain aspects of environment were measured by students in their primary data so limited scope and thus conclusion is highly partial AO4 • Census data is mixed but Area A has much higher scores for owner-occupation and 4-bedroomed houses • Less of a difference in terms of professional jobs • Area A much younger but also better qualified academically • Area A has much more varied land-use • Area B above national averages in all categories • Area B appears to be commuter suburb • Primary data is divided into five categories and all score better in Area B

Level	Mark	Descriptor
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Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	The candidates have a clear steer to the types of data collected – '…..they measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.' They are not told how this data was selected or measured. They selected sites by sampling (allow any coherent explanation of sampling (1) and at each site selected they measured the amount of litter (allow any variable) on a scale of (allow any legitimate scale (1) They designed a questionnaire for the local inhabitants asking them to evaluate the quality of their environment perhaps using a Lickert scale (1) which would enable a comparison to be made of the two villages (1) Allow any other appropriate response	(2)

Question Number	Indicative content
11 (b)	AO3 (4 marks) / AO4 (4 marks) AO3 • Census data is old -2011 so may not be reliable • Evidence suggests that Village A is changing (graduates, elderly etc) – maybe both second home owners and retirement • Many coastal villages have changed in recent years and 9/10 years since Census data released • Presence of restaurants and bars relatively high number of 'professionals' • We have no idea about the quality of the four-bed houses • Many older village houses may be large terraced houses, maybe subdivided • Conclusion is not reliable – 'always' an obvious problem • Causation not tested = better environment because.... • Plausible that better environments attract better off people • Only certain aspects of environment were measured by students in their primary data so limited scope and thus conclusion is highly partial AO4 • Census data is mixed but Village A has much higher scores for owner-occupation and 4-bedroomed houses • Less of a difference in terms of professional jobs • Village A much older but also better qualified academically • Village A has much more varied land-use • Village B above national averages in all categories • Village B appears to be commuter community • Contrasting services in the two locations – closure of pub and shop in Village B • Primary data is divided into five categories and all score better in Village B

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Mark Scheme (Results)

November 2021

Pearson Edexcel GCSE B in

Geography (1GB0)

Paper 02 - UK Geographical Issues

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Paper 2 Mark Scheme – 1GB02 (2021)

Question	Answer	Marks
1(a)	C – Chalk All other answers clearly mistaken – see diagram Figure 1	(1)

Question	Answer	Marks
1(b)	C – the breakdown or dissolving of rocks on the surface All other answers clearly and demonstrably wrong	(1)

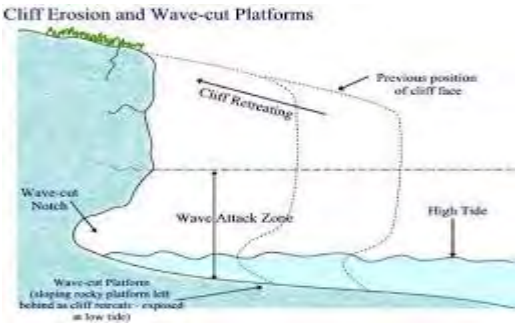
Question	Answers	Marks
1(c)	Award one mark for identifying an appropriate characteristic that makes sedimentary rock more readily erodible or why igneous rock is more resistant and a further mark for an extension/development of that idea. Not as hard (1) because more compressed (1) More bedding planes/joints (1) so more access for water etc. (1) Chemically less resistant to solution (1) for example chalk and limestone s (1) Accept any other appropriate response	(2)

Question	Answer	Marks
2 (a) (i)	B – Yorkshire and Humberside All other answers clearly and demonstrably wrong	(1)

Question	Answer	Marks
2 (a) (ii)	6.6 x 11,154/100 = 736.16 so 736.2 *(km)* One mark for correct method – one for the result Allow 736.1	(2)

Question	Answer	Marks
2(a) (iii)	Award one mark for identifying an appropriate reason why a small percentage of Scottish coastline is protected and a further mark for a legitimate development of that point. Much of the coastline is made up of hard, resistant rocks (1) so erosion rates are very low without protection (1) Much of the coastline is experiencing uplift (1) so it is advancing and not retreating (1) Much of the coastline is very lightly populated (1) making protection expensive and pointless (1)	(2)

	There is a great deal of coastline to protect (1) so only a small proportion is likely to need and/or warrant protection Accept any other appropriate response	

Question	Answer	Marks
2(b)	Award one mark for an appropriate basic explanation of coastal erosion creating cliffs (1) and a further 3 marks for its development (1) Waves erode the coastline with hydraulic energy and abrasion (1) exploiting weaknesses in the lithology/structure of the rocks (1) leading to the undercutting of the cliff (1) leading to rockfall and/or slumping due to gravity (1) development of cliffs and their retreat over time (1) these processes can be exacerbated by weathering (1) Diagram will be version of below:  Limit to three if sequence is not apparent Do not credit twice if diagram/text replicate each other Accept any other appropriate response	(4) (1) +(1+1+1)

Question	Answer	Marks
3 (a) (i)	D – a meander All other answers demonstrably wrong – see Figure 3	(1)

Question	Answers	Marks
3 (a) (ii)	Because it is higher than point X (1) evidence from contour line and/or spot height (1) Accept any other appropriate response	(2) 1+1

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Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; It is easy to access (1) so saving time and/or allowing more time for fieldwork (1) The beach is wide (1) so transect should show variation (1) It has some areas that are protected by groynes and others not (1) allowing a comparison to be made (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (b)	Award one mark for a reasonable suggestion and a further mark for supporting evidence for that idea. They appear to be evenly spaced so it is a systematic sample (1) allowing for proper comparison (1) The beach is roughly the same width at all three locations (1) allowing a fair comparison of gradient and sediment (1) There are groynes at two locations but not Profile 1 (1) which allows a comparison to be made (1) They are in different locations relative to the groynes (1) which allows a proper comparison to be made (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (c)	Award one mark for identifying a basic problem and a further mark for its extension. The profile starts under a cliff (1) si it might be a dangerous environment form rockfall (1) The presence if cliffs is likely to change the beach profile (1) without management being an issue (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
8 (d)	Award one mark for identifying a basic reason and a further mark for its extension. Not all of it appears to be of great value (1) with agricultural land above the cliffs at the western end (1) The beach is quite wide (1) so maybe coastal erosion is quite limited (1) There is a wave cut platform below the cliff at the western end of the map (1) suggesting that cliff erosion is reducing as the cliff retreats (1) The beach faces south east (1) so fetch is going to be small so wave heights will be low(er) (1) Some parts of the beach are already protected by groynes (1) which may be enough to reduce the risk of erosion (1) Allow any other appropriate response	(4) (1+1) + (1+1)

Question number	Answer	Marks
9 (a)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; It is easy to access (1) so saving time and/or allowing more time for fieldwork (1) The stream is accessed by a footpath (1) so no legal issues (1) The stream is quite narrow (1) allowing data to be gathered safely (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (b)	Award one mark for a reasonable suggestion and a further mark for supporting evidence for that idea. They appear to be evenly spaced so it is a systematic sample (1) allowing for proper comparison (1) There are tributaries (1) so there should be variations in the channel characteristics (1) They appears to be a floodplain at site 6 (1) which allows a proper assessment of flood risk (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (c)	Award one mark for identifying a basic weakness and a further mark for its extension. It is not on the main river measured (1) so cannot be relevant in downstream changes and flood risk (1) It doesn't appear to be on any river but in woodland (1) so not relevant to the study (1) It isn't on the footpath (1) so there are access issues (1) Allow any other appropriate response	(2)

Question number	Answer	Marks
9 (d)	Award one mark for identifying a basic reason and a further mark for its extension. Not all of it appears to be of great value (1) with agricultural land dominant (1) There are no settlements/houses in the valley itself (1) so flooding poses no risk to life/property (1) The river is flowing in a (relatively) deep valley (1) and/so the floodplain is very small (1) Flooding might be useful (1) bringing sediment onto the valley floor/floodplain (1) Allow any other appropriate response	(4) (1 + 1) + (1 + 1)

Question number	Answer	Marks
10 (a)	The candidates have a clear steer to the types of data collected – '…..they measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.' They are not told how this data was selected or measured. They selected sites by sampling (allow any coherent explanation of sampling (1) and at each site selected they measured the amount of litter (allow any variable) on a scale of (allow any legitimate scale (1) They designed a questionnaire for the local inhabitants asking them to evaluate the quality of their environment perhaps using a Lickert scale (1) which would enable a comparison to be made of the two areas (1) Allow any other appropriate response	(2)

Question Number	Indicative content
10 (b)	AO3 (4 marks) / AO4 (4 marks) AO3 • Census data is old -2011 so may not be reliable • Evidence suggests that Area A is changing (graduates etc) – maybe both studentification and gentrification • Presence of university supports above idea(s) as does number of 'professionals' • Many inner cities have changed in recent years and 9/10 years since Census data released • We have no idea about the quality of the four-bed houses • Many inner city houses large terraced houses maybe subdivided • Conclusion is not reliable – 'always' an obvious problem • Causation not tested = better environment because…. • Plausible that better environments attract better off people • Only certain aspects of environment were measured by students in their primary data so limited scope and thus conclusion is highly partial AO4 • Census data is mixed but Area A has much higher scores for owner-occupation and 4-bedroomed houses • Less of a difference in terms of professional jobs • Area A much younger but also better qualified academically • Area A has much more varied land-use • Area B above national averages in all categories • Area B appears to be commuter suburb • Primary data is divided into five categories and all score better in Area B

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	The candidates have a clear steer to the types of data collected – '…..they measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.' They are not told how this data was selected or measured. They selected sites by sampling (allow any coherent explanation of sampling (1) and at each site selected they measured the amount of litter (allow any variable) on a scale of (allow any legitimate scale (1) They designed a questionnaire for the local inhabitants asking them to evaluate the quality of their environment perhaps using a Lickert scale (1) which would enable a comparison to be made of the two villages (1) Allow any other appropriate response	(2)

Question Number	Indicative content
11 (b)	AO3 (4 marks) / AO4 (4 marks) AO3 • Census data is old -2011 so may not be reliable • Evidence suggests that Village A is changing (graduates, elderly etc) – maybe both second home owners and retirement • Many coastal villages have changed in recent years and 9/10 years since Census data released • Presence of restaurants and bars relatively high number of 'professionals' • We have no idea about the quality of the four-bed houses • Many older village houses may be large terraced houses, maybe subdivided • Conclusion is not reliable – 'always' an obvious problem • Causation not tested = better environment because.... • Plausible that better environments attract better off people • Only certain aspects of environment were measured by students in their primary data so limited scope and thus conclusion is highly partial AO4 • Census data is mixed but Village A has much higher scores for owner-occupation and 4-bedroomed houses • Less of a difference in terms of professional jobs • Village A much older but also better qualified academically • Village A has much more varied land-use • Village B above national averages in all categories • Village B appears to be commuter community • Contrasting services in the two locations – closure of pub and shop in Village B • Primary data is divided into five categories and all score better in Village B

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | Candidate Number

Time 1 hour 30 minutes

Paper reference **1GB0/02**

Geography B

PAPER 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **ALL** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 78.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.
- Good luck with your examination.

Turn over ▶

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SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1, which is a geological cross-section of part of south-east England.

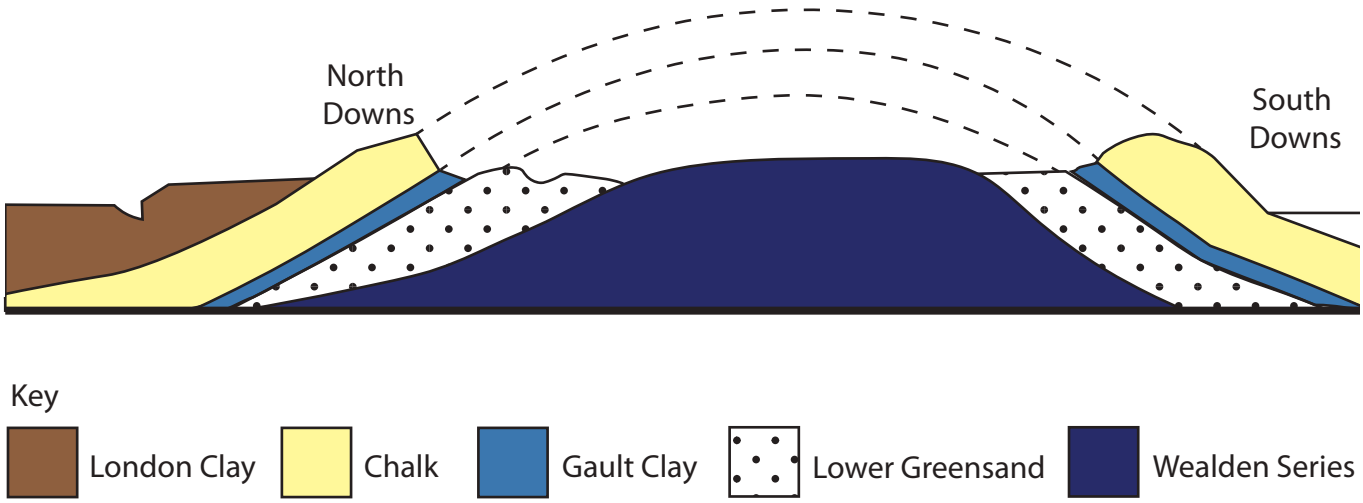


Figure 1

(a) Identify which **one** of the following is a resistant rock forming higher ground.

(1)

☒ **A** Wealden Series

☒ **B** Lower Greensand

☒ **C** Chalk

☒ **D** Gault Clay

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(b) Identify which **one** of the following is the best definition of weathering.

(1)

- ☒ **A** the processes that erode rocks
- ☒ **B** when chemicals cause pollution
- ☒ **C** the breakdown or dissolving of rocks on the surface
- ☒ **D** the weather conditions in an area

(c) Explain **one** reason why sedimentary rocks are usually eroded faster than igneous rocks.

(2)

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(Total for Question 1 = 4 marks)

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2 (a) Study Figure 2, which shows information about the percentage (%) of coastline being eroded and coastal protection for selected UK coastal regions.

Region	Length of coastline (km)	% being eroded >0.1 metres per year	% being protected
NE England	296	26.9	37.4
NW England	659	18.5	49.9
Yorkshire and Humberside	361	56.2	43.2
East Midlands	234	9.0	99.8
SE England	788	31.0	54.2
SW England	1,379	31.7	22.2
Scotland	11,154	11.6	6.6

Figure 2

(i) Identify which **one** of the regions has the highest % of coastline being eroded.

(1)

- ☒ **A** East Midlands
- ☒ **B** Yorkshire and Humberside
- ☒ **C** SE England
- ☒ **D** SW England

(ii) Calculate the length of the Scottish coastline being protected.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

Answer ..... kms

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(iii) Suggest **one** reason why only a small percentage of the Scottish coastline is being protected.

(2)

(b) Explain how coastal erosion processes create cliffs.

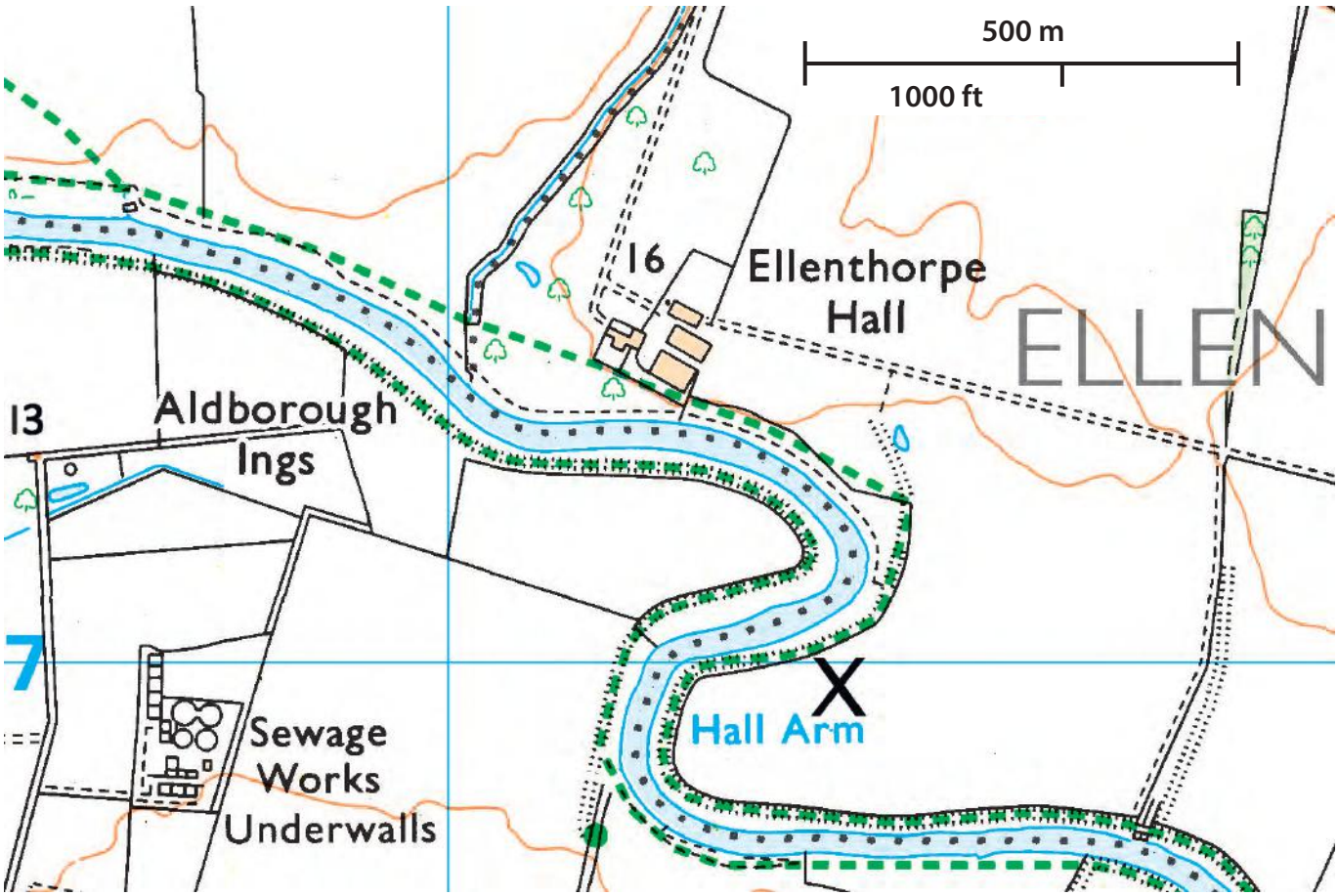
You may use a diagram to help your answer.

(4)

(Total for Question 2 = 9 marks)

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3 (a) Analyse Figure 3, which is a 1:25,000 map of part of the River Ure valley in North Yorkshire, England.



Spot heights shown in metres e.g. 16

Figure 3

(i) Identify which **one** of the following is the best description of the river feature located at **X**.

(1)

- ☒ **A** an interlocking spur
- ☒ **B** a waterfall
- ☒ **C** an oxbow lake
- ☒ **D** a meander

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(ii) Explain **one** reason why Ellenthorpe Hall is less at risk from river flooding than point X on the map.

(2)

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(b) Explain **two** reasons why human activity can cause river flooding.

(4)

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(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figures 4a and 4b, which are two maps of the UK showing its population density (Figure 4a) and its altitude (height above sea level, shown in Figure 4b).



Key

- 0-0.2 persons per hectare
- 0.21-1 persons per hectare
- 1.1-5 persons per hectare
- 5.1-10 persons per hectare
- 10.1-20 persons per hectare
- 20 > persons per hectare

100 hectares = 1 km²

Figure 4a



Key

Altitude above sea level:

- Above 600m
- 100m – 600m
- Below 100m

Figure 4b

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Assess the relationship between altitude and population density in the UK.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 28 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 5, which shows how median incomes pre-tax (£) in the UK varied with age and sex, in 2016.

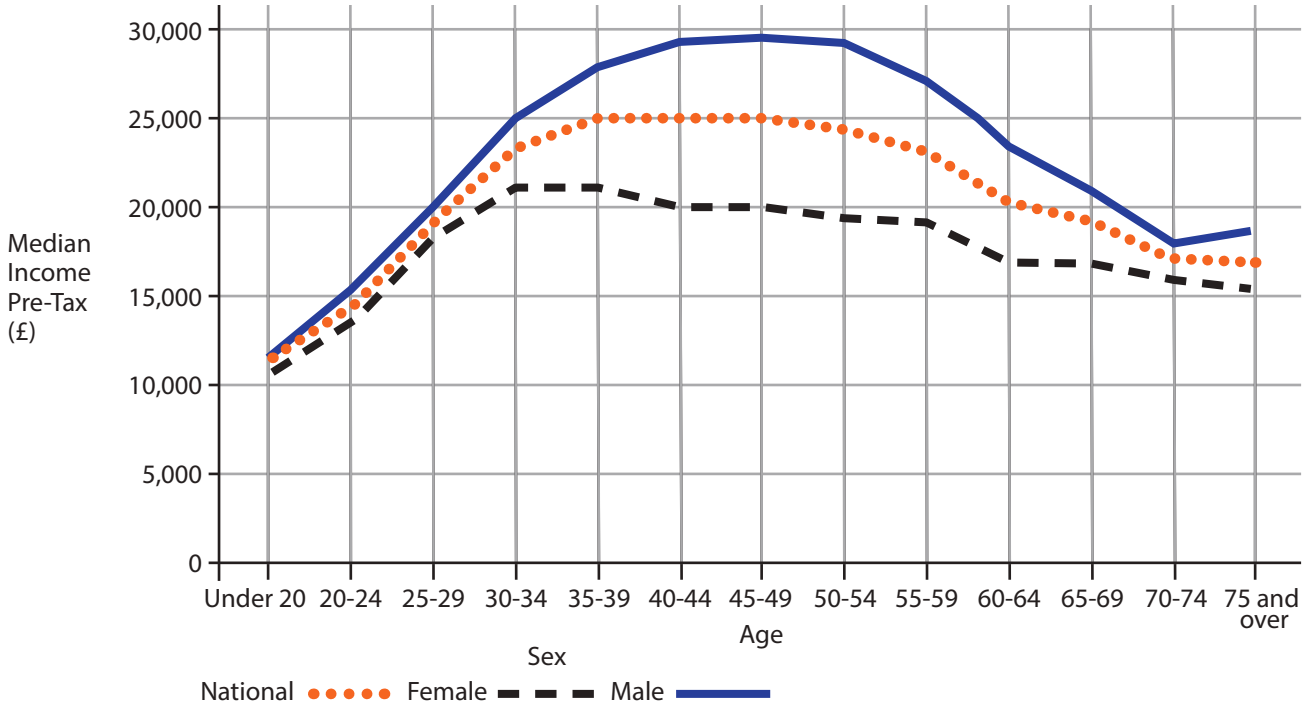


Figure 5

(i) Identify which **one** of the following is the most accurate description of sex inequalities.

(1)

☒ **A** they are most extreme for those under 30

☒ **B** they are most extreme for those aged between 35 and 65

☒ **C** they are most extreme for those who are over 65

☒ **D** there is no difference between the incomes of males and females

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(ii) Explain why median income is a better measure than mean income when comparing places.

(2)

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(b) Explain **two** ways in which TNCs (transnational corporations) have changed the economy of the UK.

(4)

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(Total for Question 5 = 7 marks)

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Dynamic UK cities

6 (a) Study Figure 6, which shows the results of opinion polls in 2014 in the UK's ten largest cities to establish whether people felt 'safe' or 'unsafe' in these urban environments.

Place	Unsafe	Not sure	Safe
Edinburgh	14%	18%	68%
Bristol	19%	24%	57%
Sheffield	25%	25%	50%
Leeds	30%	23%	47%
Liverpool	32%	20%	48%
London	39%	8%	53%
Manchester	34%	19%	47%
Glasgow	38%	18%	44%
Birmingham	41%	18%	41%
Bradford	42%	23%	35%

Figure 6

(i) Identify which **one** of the following is an accurate description of people's perception of their city.

(1)

- ☒ **A** in most cities more people feel unsafe than safe
- ☒ **B** in most cities more than 50% feel safe
- ☒ **C** in most cities less than 30% feel unsafe
- ☒ **D** in eight cities more people feel safe than unsafe

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(ii) Calculate the median value of the % (percentage) of people who feel unsafe in the UK's ten largest cities.

Answer to **one** decimal place.

You must show your working.

(2)

Answer ..... %

(b) For a UK city that you have studied, explain **two** ways in which migration has influenced its growth and character.

(4)

Named UK city

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(c) For a UK city that you have studied, explain why some parts of the city have experienced decline.

(4)

Named UK city

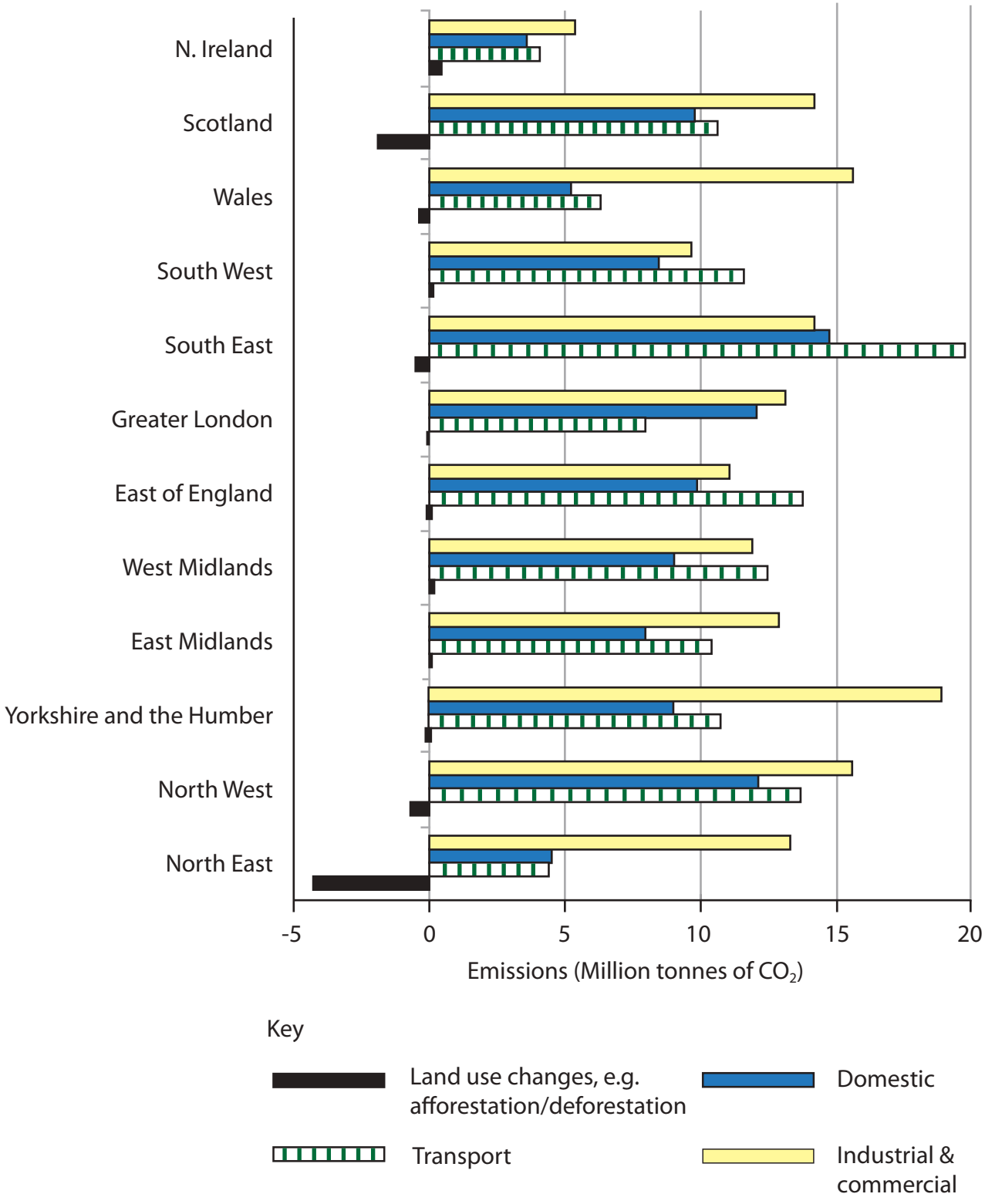
(Total for Question 6 = 11 marks)

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Investigating a UK Geographical Issue

In this question, 4 of the marks awarded will be for your spelling, punctuation and grammar and your use of specialist terminology

7 Analyse Figure 7, which shows information about the source of the UK's carbon emissions (in $MtCO_2$ – metric tonnes of carbon dioxide) by region and sector, in 2015.



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- The UK's carbon emissions have fallen to the lowest levels since the 1890s
- This is largely explained by switching from coal to natural gas for generating electricity
- Coal now accounts for only 5% of our energy consumption
- The transport sector consumes 77% of all oil used
- The target is to reduce carbon emissions by 80% of 1990 levels by 2050; currently we are 38% below 1990 levels.

Figure 7

Assess the reasons why carbon emissions vary from place to place and from time to time.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 30 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided

If you answer Question 8 put a cross in the box ☒ .

Investigating Coastal Change and Conflict.

8 A group of students decided to measure beach profiles at Amroth, Pembrokeshire, to help them collect data for their enquiry question, which was:

'Does hard engineering, such as groynes and sea walls, affect the beach morphology?'

They selected three places to measure their beach profiles (shown on Figure 8 below) and measured beach gradient and sediment size every 50 metres from the top of the beach to the sea.

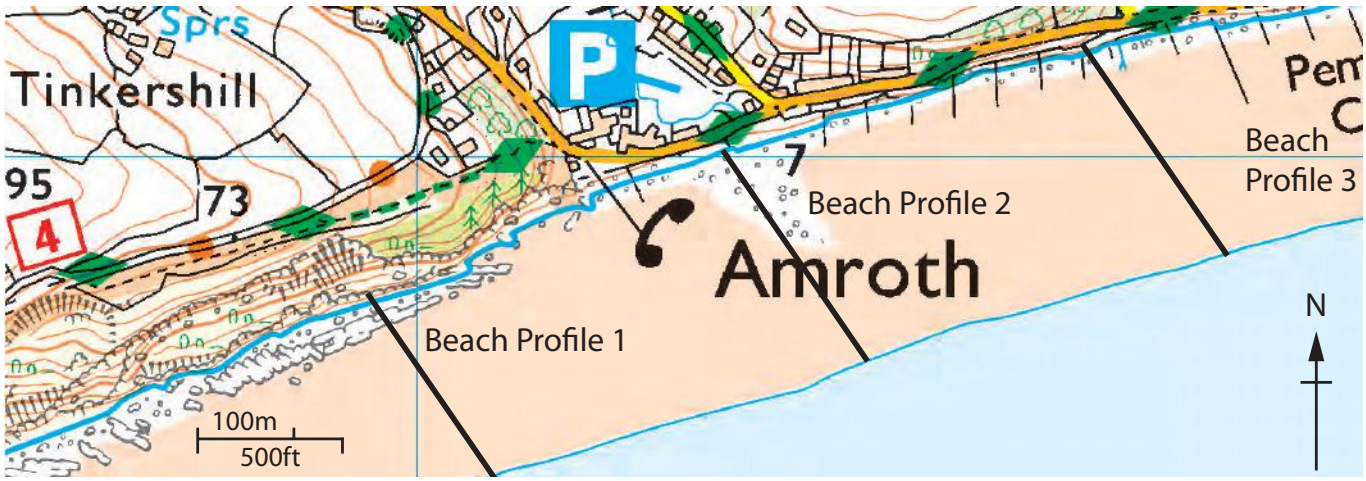


Figure 8

(a) Suggest **one** reason why the students selected this beach to carry out their fieldwork.

(2)

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(b) Suggest **one** reason the students selected the three locations shown on Figure 8 to carry out their beach profiles.

(2)

(c) Explain **one** reason why the chosen location of beach profile 1 might not be a good choice.

(2)

(d) Suggest **two** reasons why coastal erosion may not be a serious risk on this coastline.

(4)

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(Total for Question 8 = 10 marks)

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Do not answer Question 9 if you have answered Question 8

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures.

9 A group of students decided to measure river channel characteristics at Eaton, Leicestershire, to help them collect data for their enquiry question, which was:

'How do downstream changes in channel characteristics affect flood risk?'

They selected six sites (shown on Figure 9 below) to carry out measurements of channel width, average depth and velocity.

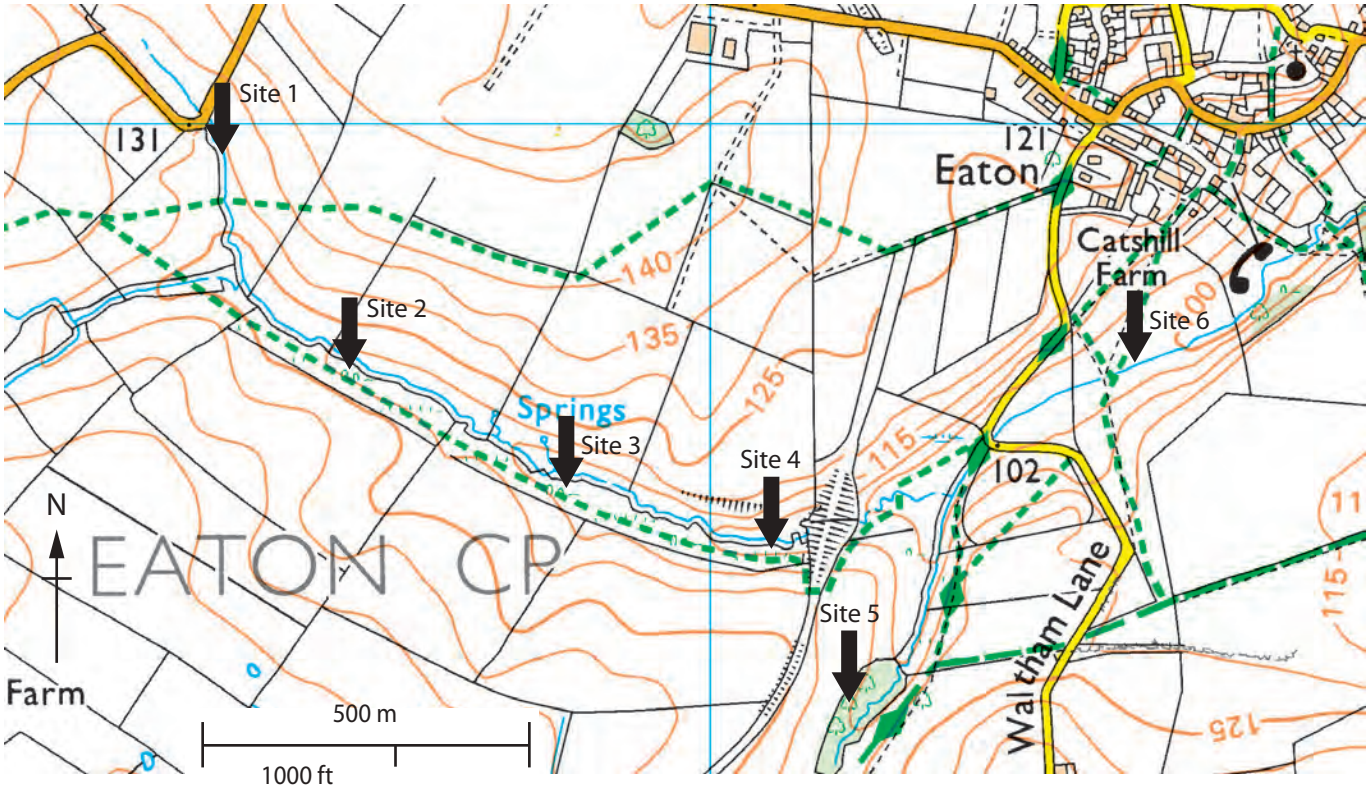


Figure 9

(a) Suggest **one** reason why the students selected this river to carry out their fieldwork.

(2)

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(b) Suggest **one** reason they selected the six sites shown on Figure 9 to carry out their channel measurements.

(2)

(c) Explain **one** reason why the chosen location of site 5 might not be a good choice.

(2)

(d) Suggest **two** reasons why river flooding may not be a serious risk in this valley.

(4)

1

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(Total for Question 9 = 10 marks)

TOTAL FOR SECTION C1 = 10 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section

Write your answers in the space provided

If you answer Question 10 put a cross in the box ☒ .

Investigating Dynamic Urban Areas.

10 A group of students carried out an environmental quality survey in two contrasting areas of their local city, Area A and Area B, in order to investigate their enquiry question:

Why does environmental quality vary in a city?

They measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.

Area A is an inner-city suburb on the edge of the CBD (Central Business District); it has mixed land-use including some former industrial sites, a university, offices and housing, most of which is 19th century.

Area B is on the edge of the built-up area and is dominated by modern 20th and 21st century housing with very little other land-use.

The students found that the environmental quality of Area B was better in all five categories. To help them explain the differences they used the 2011 census, selecting five categories of data. The results of that research are shown on Figure 10 below.

Census category	Area A	Area B	UK average
% of homes owned by the occupier(s)	26.2	77.2	67.8
% of households with 4 bedrooms	5.2	28.6	16.5
% of population aged 16–24	31.2	18.5	12.9
% of adult population with a university degree	28.2	17.5	16.2
% of working population in professional jobs	24.5	31.2	16.8

Figure 10

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(a) Explain **one** method the students might have used to measure the environmental quality in these two areas.

(2)

(b) The students concluded the following;

Environmental quality will always be better in those urban areas that are occupied by higher income people who can afford to look after their environment.

Evaluate the reliability of this conclusion.

(8)

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(Total for Question 10 = 10 marks)

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SECTION C2

Do not answer Question 11 if you have already answered Question 10

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements.

11 A group of students carried out an environmental quality survey in two contrasting villages in their local rural area in order to investigate their enquiry question:

Why does environmental quality vary in villages?

They measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.

Village A is located on the coast. It is a former fishing village now popular with holidaymakers. It has mixed land-use including a caravan park, pubs and restaurants, and housing, most of which is 19th century.

Village B is within twenty minutes' drive of a medium-sized city and is dominated by modern 20th and 21st century housing with very little other land-use; the pub and shop have recently closed.

The students found that the environmental quality of village B was better in all five categories. To help them explain the differences they used the 2011 census, selecting five categories of data. The results of that research are shown on Figure 11 below.

Census category	Village A	Village B	UK average
% of homes owned by the occupier(s)	36.2	77.2	67.8
% of households with 4 bedrooms	5.2	28.6	16.5
% of population aged 65 and over	35.2	16.5	12.9
% of adult population with a university degree	18.2	17.5	16.2
% of working population in professional jobs	24.5	31.2	16.8

Figure 11

(a) Explain **one** method the students might have used to measure the environmental quality in these two villages.

(2)

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The students concluded the following:

Environmental quality will always be better in those villages that are occupied by higher income people who can afford to look after their environment.

(b) Evaluate the reliability of this conclusion.

(8)

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(Total for Question 11 = 10 marks)

TOTAL FOR SECTION C2 = 10 MARKS
TOTAL FOR PAPER = 78 MARKS

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Acknowledgements

Figure 4 from: https://www.internetgeography.net/topics/where-are-the-areas-of-waterdeficit-and-surplus-in-the-uk/

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Figure 6 from: https://yougov.co.uk/topics/politics/articles-reports/2014/09/09/bradfordconsidered-most-dangerous-city

Figure 7: © Crown Copyright

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | Candidate Number

Time 1 hour 30 minutes

Paper reference **1GB0/02**

Geography B

PAPER 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **ALL** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 78.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.
- Good luck with your examination.

Turn over ▶

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P 6 6 7 8 1 A 0 1 3 2

Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1, which is a geological cross-section of part of south-east England.

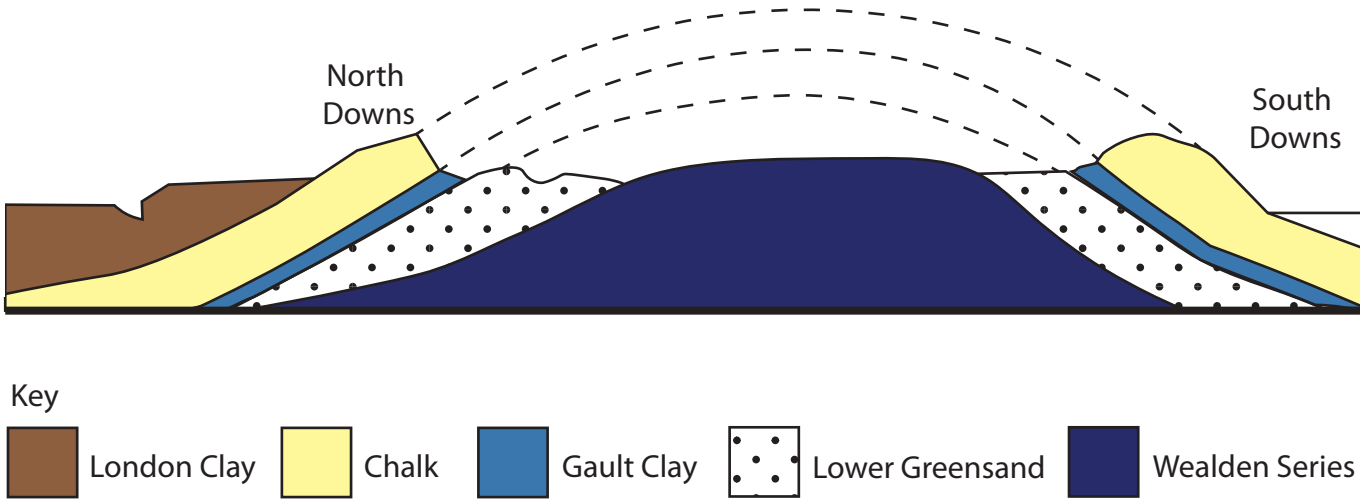


Figure 1

(a) Identify which **one** of the following is a resistant rock forming higher ground.

(1)

☒ **A** Wealden Series

☒ **B** Lower Greensand

☒ **C** Chalk

☒ **D** Gault Clay

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(b) Identify which **one** of the following is the best definition of weathering.

(1)

- ☒ **A** the processes that erode rocks
- ☒ **B** when chemicals cause pollution
- ☒ **C** the breakdown or dissolving of rocks on the surface
- ☒ **D** the weather conditions in an area

(c) Explain **one** reason why sedimentary rocks are usually eroded faster than igneous rocks.

(2)

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(Total for Question 1 = 4 marks)

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2 (a) Study Figure 2, which shows information about the percentage (%) of coastline being eroded and coastal protection for selected UK coastal regions.

Region	Length of coastline (km)	% being eroded >0.1 metres per year	% being protected
NE England	296	26.9	37.4
NW England	659	18.5	49.9
Yorkshire and Humberside	361	56.2	43.2
East Midlands	234	9.0	99.8
SE England	788	31.0	54.2
SW England	1,379	31.7	22.2
Scotland	11,154	11.6	6.6

Figure 2

(i) Identify which **one** of the regions has the highest % of coastline being eroded.

(1)

- ☒ **A** East Midlands
- ☒ **B** Yorkshire and Humberside
- ☒ **C** SE England
- ☒ **D** SW England

(ii) Calculate the length of the Scottish coastline being protected.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

Answer ..... kms

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(iii) Suggest **one** reason why only a small percentage of the Scottish coastline is being protected.

(2)

(b) Explain how coastal erosion processes create cliffs.

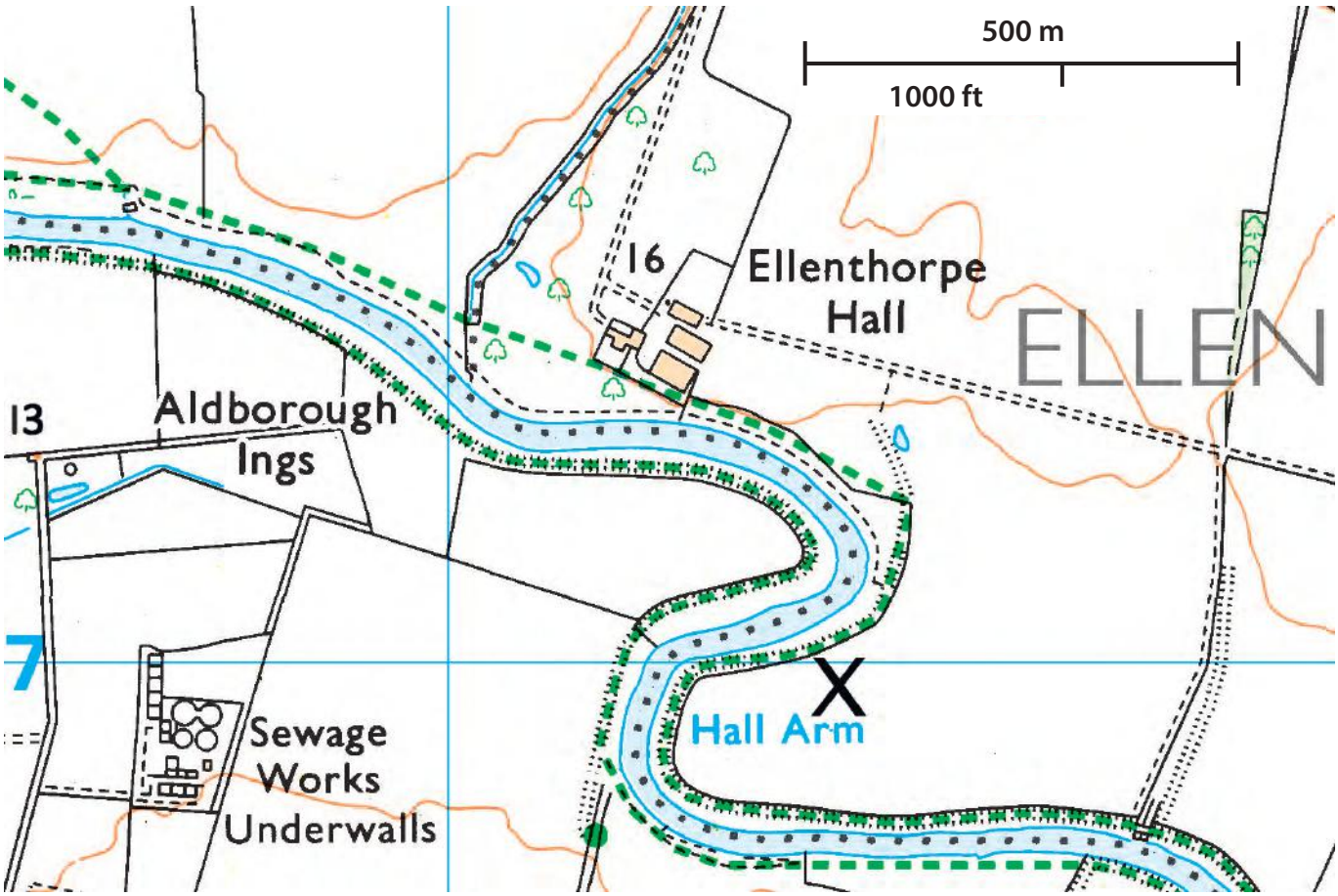
You may use a diagram to help your answer.

(4)

(Total for Question 2 = 9 marks)

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3 (a) Analyse Figure 3, which is a 1:25,000 map of part of the River Ure valley in North Yorkshire, England.



Spot heights shown in metres e.g. 16

Figure 3

(i) Identify which **one** of the following is the best description of the river feature located at **X**.

(1)

- ☒ **A** an interlocking spur
- ☒ **B** a waterfall
- ☒ **C** an oxbow lake
- ☒ **D** a meander

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(ii) Explain **one** reason why Ellenthorpe Hall is less at risk from river flooding than point X on the map.

(2)

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(b) Explain **two** reasons why human activity can cause river flooding.

(4)

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(Total for Question 3 = 7 marks)

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Investigating a UK Geographical Issue

4 Analyse Figures 4a and 4b, which are two maps of the UK showing its population density (Figure 4a) and its altitude (height above sea level, shown in Figure 4b).



Key

- 0-0.2 persons per hectare
- 0.21-1 persons per hectare
- 1.1-5 persons per hectare
- 5.1-10 persons per hectare
- 10.1-20 persons per hectare
- 20 > persons per hectare

100 hectares = 1 km²

Figure 4a



Key

Altitude above sea level:

- Above 600m
- 100m – 600m
- Below 100m

Figure 4b

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Assess the relationship between altitude and population density in the UK.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 28 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 5, which shows how median incomes pre-tax (£) in the UK varied with age and sex, in 2016.

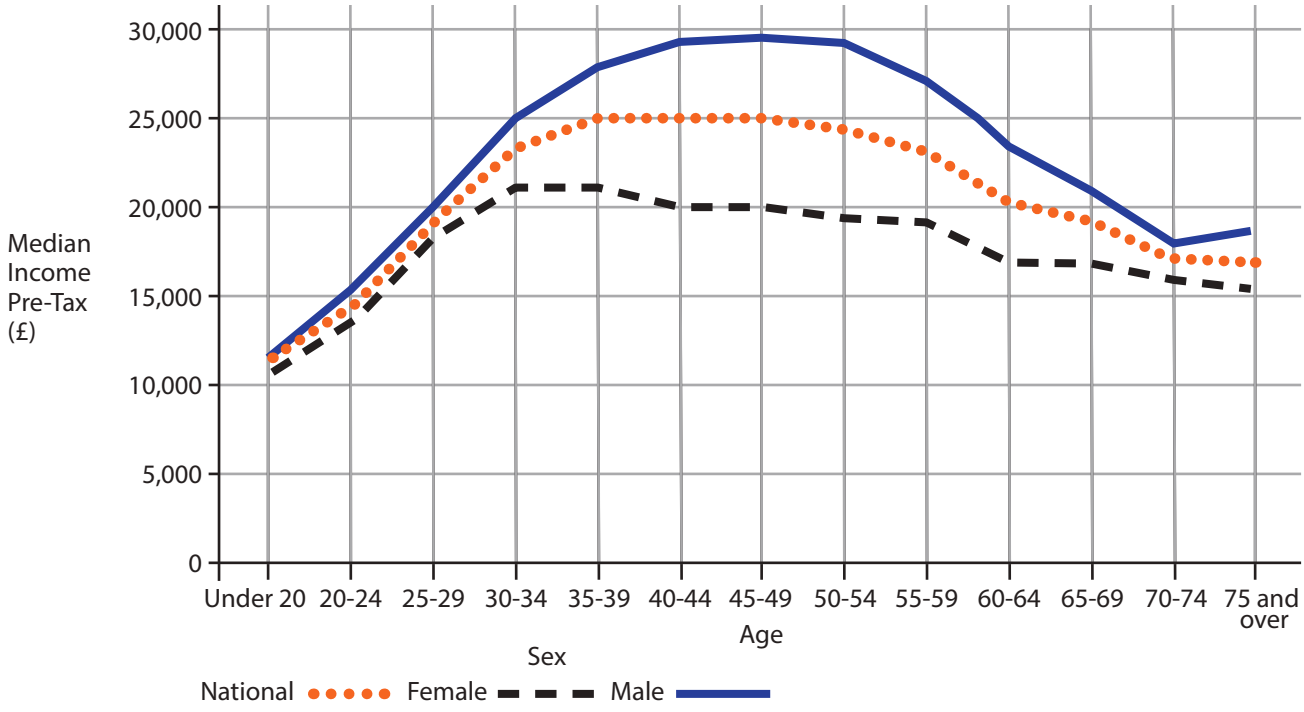


Figure 5

(i) Identify which **one** of the following is the most accurate description of sex inequalities.

(1)

☒ **A** they are most extreme for those under 30

☒ **B** they are most extreme for those aged between 35 and 65

☒ **C** they are most extreme for those who are over 65

☒ **D** there is no difference between the incomes of males and females

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(ii) Explain why median income is a better measure than mean income when comparing places.

(2)

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(b) Explain **two** ways in which TNCs (transnational corporations) have changed the economy of the UK.

(4)

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(Total for Question 5 = 7 marks)

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Dynamic UK cities

6 (a) Study Figure 6, which shows the results of opinion polls in 2014 in the UK's ten largest cities to establish whether people felt 'safe' or 'unsafe' in these urban environments.

Place	Unsafe	Not sure	Safe
Edinburgh	14%	18%	68%
Bristol	19%	24%	57%
Sheffield	25%	25%	50%
Leeds	30%	23%	47%
Liverpool	32%	20%	48%
London	39%	8%	53%
Manchester	34%	19%	47%
Glasgow	38%	18%	44%
Birmingham	41%	18%	41%
Bradford	42%	23%	35%

Figure 6

(i) Identify which **one** of the following is an accurate description of people's perception of their city.

(1)

- ☒ **A** in most cities more people feel unsafe than safe
- ☒ **B** in most cities more than 50% feel safe
- ☒ **C** in most cities less than 30% feel unsafe
- ☒ **D** in eight cities more people feel safe than unsafe

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(ii) Calculate the median value of the % (percentage) of people who feel unsafe in the UK's ten largest cities.

Answer to **one** decimal place.

You must show your working.

(2)

Answer ..... %

(b) For a UK city that you have studied, explain **two** ways in which migration has influenced its growth and character.

(4)

Named UK city

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(c) For a UK city that you have studied, explain why some parts of the city have experienced decline.

(4)

Named UK city

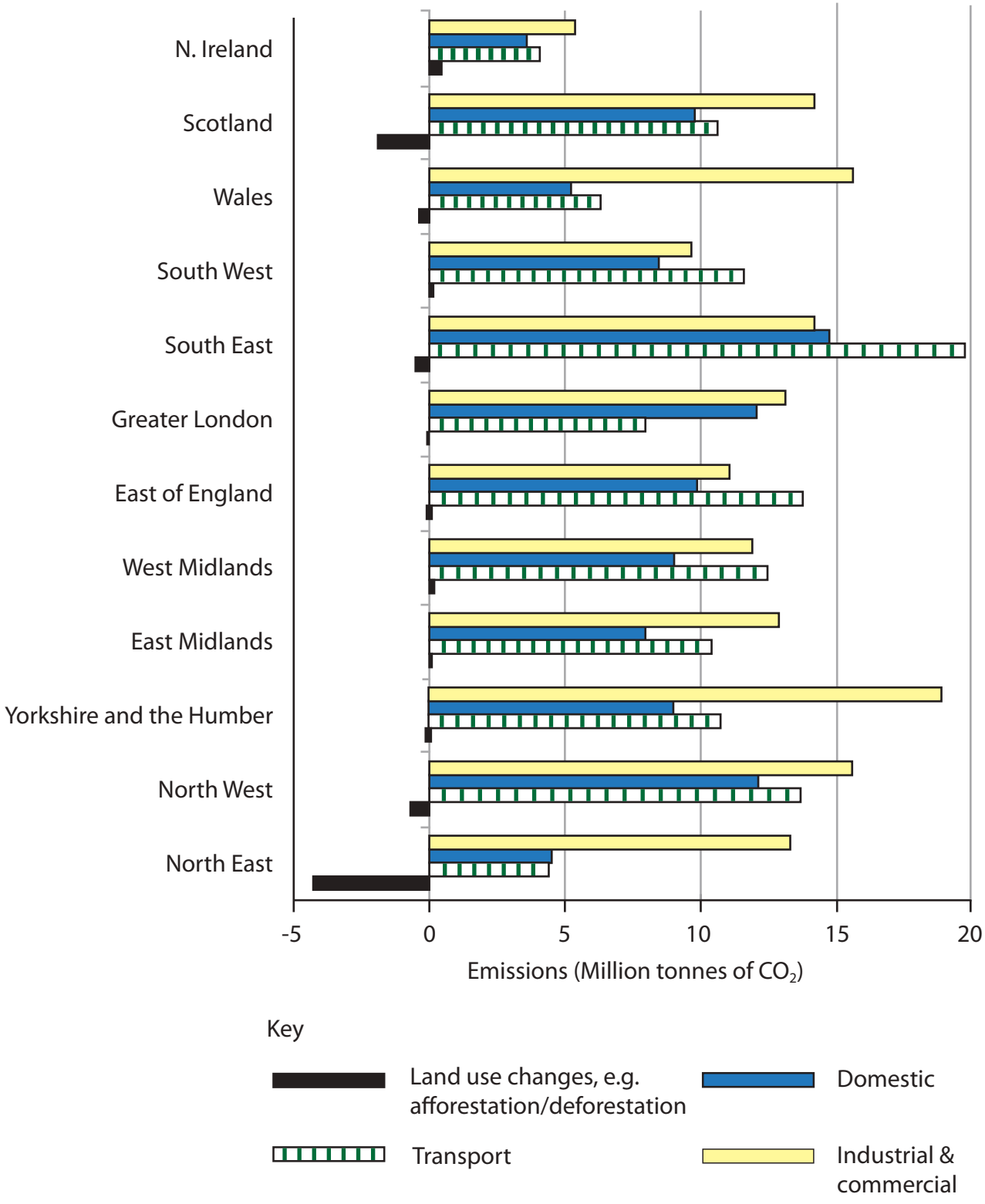
(Total for Question 6 = 11 marks)

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Investigating a UK Geographical Issue

In this question, 4 of the marks awarded will be for your spelling, punctuation and grammar and your use of specialist terminology

7 Analyse Figure 7, which shows information about the source of the UK's carbon emissions (in $MtCO_2$ – metric tonnes of carbon dioxide) by region and sector, in 2015.



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- The UK's carbon emissions have fallen to the lowest levels since the 1890s
- This is largely explained by switching from coal to natural gas for generating electricity
- Coal now accounts for only 5% of our energy consumption
- The transport sector consumes 77% of all oil used
- The target is to reduce carbon emissions by 80% of 1990 levels by 2050; currently we are 38% below 1990 levels.

Figure 7

Assess the reasons why carbon emissions vary from place to place and from time to time.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 30 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided

If you answer Question 8 put a cross in the box ☒ .

Investigating Coastal Change and Conflict.

8 A group of students decided to measure beach profiles at Amroth, Pembrokeshire, to help them collect data for their enquiry question, which was:

'Does hard engineering, such as groynes and sea walls, affect the beach morphology?'

They selected three places to measure their beach profiles (shown on Figure 8 below) and measured beach gradient and sediment size every 50 metres from the top of the beach to the sea.

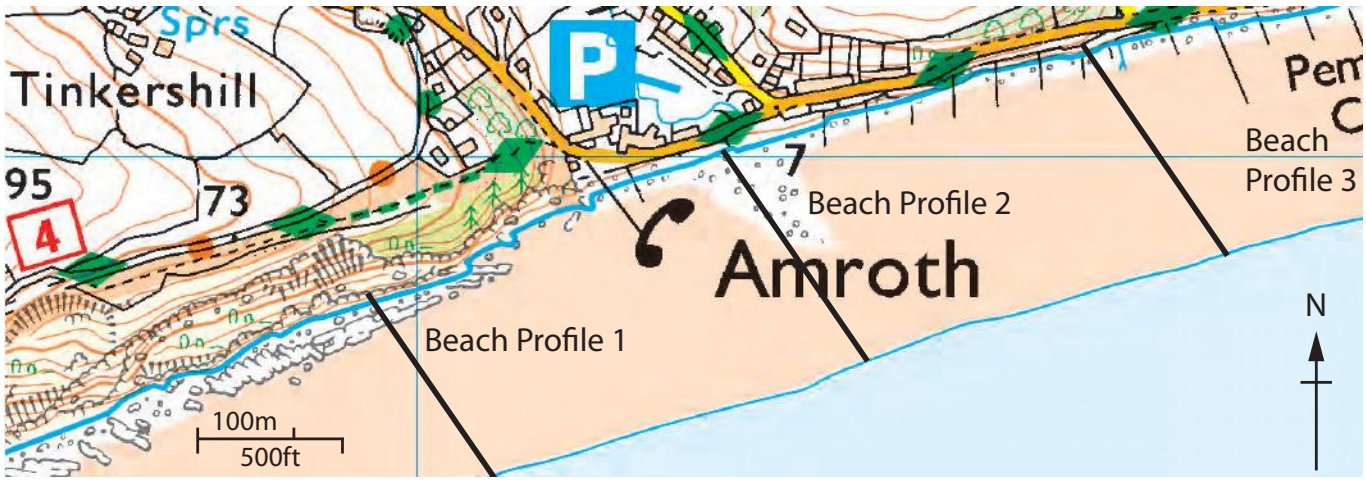


Figure 8

(a) Suggest **one** reason why the students selected this beach to carry out their fieldwork.

(2)

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(b) Suggest **one** reason the students selected the three locations shown on Figure 8 to carry out their beach profiles.

(2)

(c) Explain **one** reason why the chosen location of beach profile 1 might not be a good choice.

(2)

(d) Suggest **two** reasons why coastal erosion may not be a serious risk on this coastline.

(4)

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(Total for Question 8 = 10 marks)

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Do not answer Question 9 if you have answered Question 8

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures.

9 A group of students decided to measure river channel characteristics at Eaton, Leicestershire, to help them collect data for their enquiry question, which was:

'How do downstream changes in channel characteristics affect flood risk?'

They selected six sites (shown on Figure 9 below) to carry out measurements of channel width, average depth and velocity.

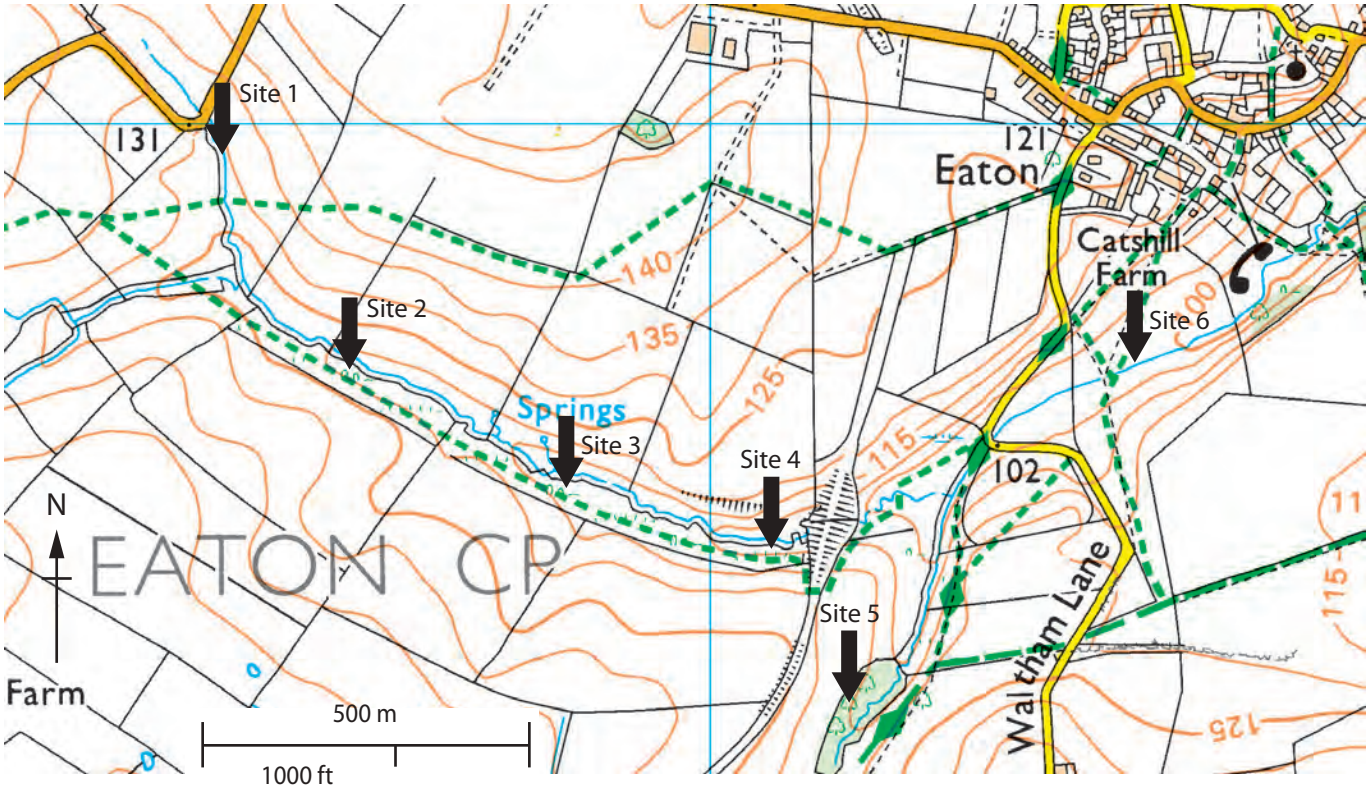


Figure 9

(a) Suggest **one** reason why the students selected this river to carry out their fieldwork.

(2)

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(b) Suggest **one** reason they selected the six sites shown on Figure 9 to carry out their channel measurements.

(2)

(c) Explain **one** reason why the chosen location of site 5 might not be a good choice.

(2)

(d) Suggest **two** reasons why river flooding may not be a serious risk in this valley.

(4)

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(Total for Question 9 = 10 marks)

TOTAL FOR SECTION C1 = 10 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section

Write your answers in the space provided

If you answer Question 10 put a cross in the box ☒ .

Investigating Dynamic Urban Areas.

10 A group of students carried out an environmental quality survey in two contrasting areas of their local city, Area A and Area B, in order to investigate their enquiry question:

Why does environmental quality vary in a city?

They measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.

Area A is an inner-city suburb on the edge of the CBD (Central Business District); it has mixed land-use including some former industrial sites, a university, offices and housing, most of which is 19th century.

Area B is on the edge of the built-up area and is dominated by modern 20th and 21st century housing with very little other land-use.

The students found that the environmental quality of Area B was better in all five categories. To help them explain the differences they used the 2011 census, selecting five categories of data. The results of that research are shown on Figure 10 below.

Census category	Area A	Area B	UK average
% of homes owned by the occupier(s)	26.2	77.2	67.8
% of households with 4 bedrooms	5.2	28.6	16.5
% of population aged 16–24	31.2	18.5	12.9
% of adult population with a university degree	28.2	17.5	16.2
% of working population in professional jobs	24.5	31.2	16.8

Figure 10

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(a) Explain **one** method the students might have used to measure the environmental quality in these two areas.

(2)

(b) The students concluded the following;

Environmental quality will always be better in those urban areas that are occupied by higher income people who can afford to look after their environment.

Evaluate the reliability of this conclusion.

(8)

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(Total for Question 10 = 10 marks)

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SECTION C2

Do not answer Question 11 if you have already answered Question 10

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements.

11 A group of students carried out an environmental quality survey in two contrasting villages in their local rural area in order to investigate their enquiry question:

Why does environmental quality vary in villages?

They measured litter, traffic noise, graffiti, amount of open space and the quality of the buildings.

Village A is located on the coast. It is a former fishing village now popular with holidaymakers. It has mixed land-use including a caravan park, pubs and restaurants, and housing, most of which is 19th century.

Village B is within twenty minutes' drive of a medium-sized city and is dominated by modern 20th and 21st century housing with very little other land-use; the pub and shop have recently closed.

The students found that the environmental quality of village B was better in all five categories. To help them explain the differences they used the 2011 census, selecting five categories of data. The results of that research are shown on Figure 11 below.

Census category	Village A	Village B	UK average
% of homes owned by the occupier(s)	36.2	77.2	67.8
% of households with 4 bedrooms	5.2	28.6	16.5
% of population aged 65 and over	35.2	16.5	12.9
% of adult population with a university degree	18.2	17.5	16.2
% of working population in professional jobs	24.5	31.2	16.8

Figure 11

(a) Explain **one** method the students might have used to measure the environmental quality in these two villages.

(2)

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The students concluded the following:

Environmental quality will always be better in those villages that are occupied by higher income people who can afford to look after their environment.

(b) Evaluate the reliability of this conclusion.

(8)

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(Total for Question 11 = 10 marks)

TOTAL FOR SECTION C2 = 10 MARKS
TOTAL FOR PAPER = 78 MARKS

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Mark Scheme (Results)

Summer 2022

Pearson Edexcel GCSE

In Geography Spec B (1GB0) Paper 02

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

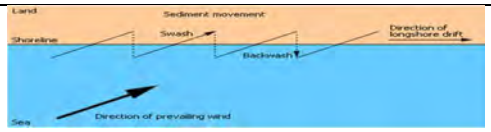
Question	Answer	Marks
1(a)	B – North-West Scotland All other answers clearly mistaken – AO1	**(1)**

Question	Answers	Marks
1(b)	Award one mark for explaining an appropriate human impact with further marks for detail of the process; In some areas (many) settlements have been built changing the original land-use (1) from forest to urban/farmland environments and/or whereas in other areas there have been fewer changes (1) Farming has cleared the original forest cover creating a 'new' rural landscape (1) where crops are grown to be sold (1) although some areas remain 'wild' (1) We have managed coastlines and rivers in order to stop flooding and protect people (1) so these areas are not as natural (1) whilst in other areas less management has taken place (1) Do not reward simple descriptive statements with no explanation e.g. 'houses have been built' as opposed to 'houses have been built changing the original landscape (1) reducing the amount of forest/farmland (1) **Accept any other appropriate response**	**(4)** (1 + 1) +(1+1)

Question	Answer	Marks
2 (a) (i)	C – from the north-west All other answers clearly and demonstrably wrong	**(1)**

Question	Answer	Marks
2 (a) (ii)	It increases it because more water = more energy (1) leads to more erosion and/or hydraulic action and/or more abrasion (1) **Accept any other appropriate response**	**(2)** 1+1

Question	Answer	Marks
2(a) (iii)	Expect a diagram of the process of longshore drift and how it creates a spit – this does not need to show explicitly the formation of a spit. Waves arrive at an angle (1) driving sediment up the beach through swash (1) this then returns perpendicular to the beach angle – backwash (1) leading to a net movement of sediment down the beach to form a spit (1) which is a depositional landform (1)	**(4)** 1+(1+1 +1)

	 **Accept any other appropriate response**	

Question	Answers	Marks
3 (a)	Because they use water to grow and therefore less water reached the river reducing peak discharge (1) Because tree roots act as conduits for water so less water will run over the surface reducing peak discharge (1) Because trees act as a canopy intercepting rain thus slowing down its delivery to the ground reducing peak discharge (1) **Accept any other appropriate response**	**1**

Question	Answers	Marks
3 (b)	Because it works reasonably well and/or more efficient than alternatives (1) due to its physical strength and/or good design and/or resilience (1) so protects people and property that would otherwise be damaged (1) causing significant income costs and/or threatening lives (1) **Accept any other appropriate response**	**2** **(1+1)**

Question	Answer	Marks
3(c)	Do not credit the naming of a river. **Sediment load** Generally increases downstream as more erosion takes place adding to load delivered from upstream (1) plus contribution of tributaries (1) also gets finer as consequence of attrition so mostly suspended load (1) Allow – as rivers enter the sea velocity may decrease (1) and deposit sediment load (1) **Velocity** Generally, it increases downstream despite decrease in gradient as channel becomes more efficient (1) detail of same e.g. more semi-circular (1) so less frictional drag on water thus faster (1) Allow – as water enters the sea velocity may decrease (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question	Indicative content
4	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Forestry is not especially profitable so, given the choice landowners will opt for different land-uses where they can • High ground is often too wet and too cold for productive forests • Much of Scotland's higher areas devoted to grouse moors/deer stalking thus deforested • It is also inaccessible therefore expensive to extract timber and timber products from remote mountainous regions with poor infrastructure • National variations explained by the above factors – Wales and Scotland are much more mountainous than England • Same plays out on a local scale as with the distribution in and around Fort William • Slight increase probably reflects expense of importing timber • This might also stimulate further investment in forestry **AO4 (4 marks)** • At a local scale on the map there is a close relationship between topography and forest cover • There is no forest on the highest ground, e.g the >1000 m peaks in the south-east corner • Some might note the Killiechonate 'Forest' (but old meaning of forest) • It tends to occupy the steeper valley side slopes – the sharp boundaries suggest that much of it is plantation forestry • Variation in the UK is considerable – this part of Scotland looks to be a little more than 18% • Lowest figure in England is significant

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a) (i)	D –London All other answers demonstrably mistaken – see Figure 5	**(1)**

Question number	Answer	Marks
5(a) (ii)	The middle value of the nine regions so; -21.5 - accept 21.5 **Do not accept 'south west'**	**(1)**

Question number	Answer	Marks
5 (b)	Award one mark for basic reason and a second through an extension which might be an application of that idea. Do not credit the motives (push/pull factors) for migration unless they are used to explain variation in numbers of migrants in different locations e.g. growth of London. Population will have increased but unevenly (1) because some places will have had more job opportunities than others e.g London (1) The age structure of the population will have changed becoming younger (1) because migrants seeking work and/or students are mostly in younger age cohorts (1) The ethnic structure of the population will have changed becoming more diverse (1) especially in large cities which have more job opportunities for migrants (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
6 (a)(i)	They are very different (1) MK has much larger 25-44 (working) population (1) but fewer 55+ (1) and fewer 15-24 (1) but more 0-14 (1) gender balance similar (1) allow a mark for supporting data e.g. a percentage difference between two cohorts (1) **Do not credit explanation** **Accept any other appropriate response**	**(3)** 1+1+1

Question number	Answer	Marks
6 (a)(ii)	Award one mark for the correct method and one mark for the correct solution to one decimal place 554,500 – 462,400 = 92,100 92,100 /462,400 x100 = 19.92 = **19.9%**	**(2)** 1+1

Question number	Answer	Marks
6 (b)	Much depends on the chosen city (expect London and Birmingham to dominate) Accept answers that are relevant to **either** site **or** situation but not in the correct place on the question paper e.g. comments about situation under the 'Site' heading. Allow to 4 marks answers which reference location in general without any clear distinction between site and situation. **Site** Estuary site allowing access to river trade and markets (1) so increasing economic growth (1) Bridging point so nodal point for routes allowing markets to develop (1) and then multiplier effect (1) Dry-point site on slightly raised ground (1) so avoiding flood risk (1) Defensive site on higher ground (1) so point of safety for administration/markets (1) **Situation** Position relative to other places such as the continent of Europe (1) which will promote trade (1) Position relative to natural resources such as coalfields/iron ore (1) so important for economic growth (1) **Accept any other appropriate response**	**(4)**

Question number	Answer	Marks
6 (c)	Much depends on the chosen city (expect London and Birmingham to dominate) Award one mark for identifying a basic reason for contrasts and a further mark for expansion/application of that idea linking it to inequality. Deindustrialisation leading to job losses in some parts of the city and reduction in incomes (1) which reduces tax income for local authorities who have less money to spend on education and health services (1) Lack of government spending (austerity) has reduced spending on services (1) including education/health services thus increasing inequality (1) In-migration of wealthy foreigners has increased incomes in some parts of a city (1) whereas other areas of social housing have seen average incomes decline (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question	Indicative content
7	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Direction of causation is not clear • Unclear how large cities would be evaluated in 'healthy' high street survey e.g London • Unhealthy high streets as much a consequence of deprivation as they are a cause • Retailers abandon poorer areas first shutting down outlets which have low rental value • That is a consequence of falling demand but also changes in retailing (on-line shopping) • So high streets dying everywhere, even in affluent areas • Life expectancy closely related to income deprivation • Growth of endogenous lifestyle causes of death e.g drugs, alcohol abuse, smoking • Deindustrialisation and government policies possible causes, the first unequivocally, the second more contentious • Last election results in 'red wall' constituencies a consequence • Current governments 'levelling up' promises a consequence **AO4 (4 marks)** • There is a clear north/south divide in terms of life expectancy but also a rural/urban contrast • However, small areas of 'worst' in the south too, including parts of London and coastal Essex • Unhealthy and healthy towns defined by types of retail and service outlets • Relationship with deprivation stated in text and clear on map • Three of 'worst' places are coastal • All five located in 'worst' areas • No information of where the 'healthiest' high streets might be

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Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
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Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because they are all 'stakeholders'/'players' (1) but might have contrasting view and or a wide range of views (1) Because they are all local (1) and so have knowledge of the issue (1) Because they have different life experiences and (1) therefore different opinions (1) Because they are different ages and (1) therefore different opinions (1) Because the students wanted different views (1) so that there was a more representative/reliable overview (1) **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
8 (a) (ii)	Award one mark for a reasonable explanatory point why an identifiable group might be 'useful to this enquiry'. Possible suggestions include, environmentalists, visitors, locals who do not live close to the coast, young people or farmers. Environmentalists will have a view about the impact on local habitats/biosphere (1) without any obvious financial axe to grind or bias (1). Tourists will have a view because the town obviously has some dependency on tourism (1) so their views would be important e.g. they may want the beach to be protected (1) Young people in the town will have a view because it will affect them most (1) in the future and/or they currently use the beach most (1). Local politicians will have a view about the cost/benefits (1) and may consider their popularity/electability is dependent on their stated views (1). Farmers would be concerned about loss of land (1) and risk to livestock and income (1). People who own property close to the beach (1) will have views about the potential loss of the value of their homes (1).	**(2)** (1+1)

	Do not credit development of an existing interviewee e.g. 'shop owner' or 'retired elderly resident' unless a very clear differentiation is made e.g. 'homeowner'. **Allow any other appropriate response**	

Question number	Answer	Marks
8 (a) (iii)	Award **one** mark for identifying the type of data secondary data might generate and suggesting how it might 'help' the enquiry. Allow an implicit rather than explicit identification of a secondary data source as in 'we collected secondary data about the population structure of the town' Research on the coastal management plan for this town from government agencies (1) to help with questions for planning officer and others (1) Use of old maps/newspaper articles/photographs (1) to research changes in the coastline to help understand current coastal management (1) Use of current maps/GIS (1) to plan quantitative data collection e.g. choice of sites (1) Population data and/or census data or similar demographic data (1) to help identify the groups to target for primary data collection (1) **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
8 (a) (iv)	Award **one** mark for identifying a basic reason for disagreement which is likely to be based on their vested interests or their job e.g. the Planning Officer and a further mark for its extension. The focus needs to be implicitly and/or explicitly focussed on one or more of the interviewees comments. Different roles in the process (1) e.g. the planning officer is working for the council and has a vested interest in the plans being successful (1) Financial interests will be central to those with property affected by coastal erosion (1) as with the café owner who stands to lose a great deal if tourism declines (1)	**(4)** (1+1) + (1+1)

	Residents will have varied views according to their view/perception of the town (1) as illustrated by the cynical views of the elderly resident hinting at corruption (1) A reduction in spending on services means they deteriorate (1) leading to a spiral of decline (1) Protecting the coastline is a lost cause in the long run (1) so short-term strategies are a waste of money (1) Allow explanations based on **one** opinion rather than reasons why they 'did not agree' but limit to 2 marks in total as in 1. The café owner wants to protect her business because it is threatened 2. The elderly resident wants the council to spend more on services **Allow any other appropriate response**	

Question number	Answer	Marks
9 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because they are all 'stakeholders'/'players' (1) but might have contrasting view and or a wide range of views (1) Because they are all local (1) and so have knowledge of the issue (1) Because they have different life experiences and (1) therefore different opinions (1) Because they are different ages and (1) therefore different opinions (1) Because the students wanted different views (1) so that there was a more representative/reliable overview (1) **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
9 (a) (ii)	Award one mark for a reasonable explanatory point why an identifiable group might be 'useful to this enquiry'. Possible suggestions include, environmentalists, visitors, locals who do not live close to the river, young people or farmers. Environmentalists will have a view about the impact on local habitats/biosphere (1) without any obvious financial axe to grind or bias (1). Tourists will have a view because the town obviously has some dependency on tourism (1) so their views would be important e.g. they may want the town centre to be protected (1) Young people in the town will have a view because it will affect them most (1) in the future and/or they currently use the floodplain most (1). Local politicians will have a view about the cost/benefits (1) and may consider their popularity/electability is dependent on their stated views (1). Farmers would be concerned about loss of productive land (1) and risk to livestock and income (1). People who own property close to the town centre (1) will have views about the potential loss of the value of their homes (1). Do not credit development of an existing interviewee e.g. 'shop owner' or 'retired elderly resident' unless a very clear differentiation is made e.g. 'homeowner'. **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
9 (a) (iii)	Award **one** mark for identifying the type of data secondary data might generate and suggesting how it might 'help' the enquiry. Allow an implicit rather than explicit identification of a secondary data source as in 'we collected secondary data about the population structure of the town' Research on the flood management plan for this town from government agencies (1) to help with questions for planning officer and others (1) Use of old maps/newspaper articles/photographs (1) to research previous flood events to help understand current coastal management (1)	**(2)** (1+1)

	Use of current maps/GIS (1) to plan quantitative data collection e.g. choice of sites (1) Population data and/or census data or similar demographic data (1) to help identify the groups to target for primary data collection (1) **Allow any other appropriate response**	

Question number	Answer	Marks
9 (a) (iv)	Award **one** mark for identifying a basic reason for disagreement which is likely to be based on their vested interests or their job e.g. the Planning Officer and a further mark for its extension. The focus needs to be implicitly and/or explicitly focussed on one or more of the interviewees comments. Different roles in the process (1) e.g. the planning officer is working for the council and has a vested interest in the plans being successful (1) Financial interests will be central to those with property affected by flooding (1) as with the café owner who stands to lose a great deal if tourism declines (1) Residents will have varied views according to their view/perception of the town (1) as illustrated by the cynical views of the elderly resident hinting at corruption (1) A reduction in spending on services means they deteriorate (1) leading to a spiral of decline (1) Flood defences are a lost cause in the long run (1) so short-term strategies are a waste of money (1) Allow explanations based on **one** opinion rather than reasons why they 'did not agree' but limit to 2 marks in total as in 3. The café owner wants to protect her business because it is threatened 4. The elderly resident wants the council to spend more on services **Allow any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
10 (a) (i)	C convenient E friendly These two have the largest font on Figure 9	**(2)** (1+1)

Question Number		Indicative content
10 (a) (ii)		**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Random selection of residents may lead to unreliable results • Saturday morning may not be a typical cross-section of the population • It is unknown what the age range of residents asked was • It is unknown if residence was established – might some be visitors especially in summer? • Some word choices not clearly positive or negative – might be either e.g. 'changing' or 'old'. • 'Convenient' likely to reflect motive or being in the town (e.g shopping on a Saturday morning • Some students may not have been taking this seriously e.g. 'fun' • Hard to draw meaningful conclusions from such a narrow base of responses • Student responses based on a 'snapshot' of mostly(?) first impressions – residents have more knowledge and also more inclined to be positive about their own town • However, there are obvious contrasts here that present a useful overview. **AO4** • Students responses mostly very negative – top words include 'dark, dirty and deprived'. • Only two clearly positive words in their responses – cool' and 'fun' • Residents much more positive with 'convenient and friendly' as the two top choices followed by 'tidy and clean' • But residents less consistent with more negative words than students have positives e.g. 'threatening, deprived, dirty, grim, unsafe' • Some obvious variation of view in both groups e.g. residents have both 'unsafe' and 'safe' whilst students have both 'cool' and 'fun' • Very little overlap (words in common) although 'deprived, dark, threatening and old' feature on both lists.
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a) (i)	C = tidy E = friendly These two have the largest font on Figure 11	**(2)** (1+1)

Question Number		Indicative content
11 (a)(ii)		**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Random selection of residents may lead to unreliable results • Saturday morning may not be a typical cross-section of the population • It is unknown what the age range of residents asked was • It is unknown if residence was established – might some be visitors especially in summer? • Some word choices not clearly positive or negative with – might be either e.g. 'quiet' or 'old'. • 'Community' likely to reflect history of residence and not the environment • Some students may not have been taking this seriously e.g. 'rubbish' • Hard to draw meaningful conclusions from such a narrow base of responses • Student responses based on a 'snapshot' of mostly(?) first impressions – residents have more knowledge and also more inclined to be positive about their own village • However, there are obvious contrasts here that present a useful overview. **AO4** • Students responses mostly negative or equivocal – top words include 'boring, quiet, dead'. • However, a few clearly positive words in their responses – 'pretty' and 'picturesque' • Residents much more positive with 'Friendly and community' as the two top choices followed by 'tidy' • But residents less consistent with more negative words than students have positives e.g. 'expensive, noisy, dirty, unsafe' • Some obvious variation of view in both groups e.g. residents have both 'unsafe' and 'safe' whilst students have both 'pretty' and 'rubbish' • Very little overlap (words in common) although 'rich' on one list and 'expensive' on the other might be claimed as such.
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
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Mark Scheme (Results)

Summer 2022

Pearson Edexcel GCSE

In Geography Spec B (1GB0) Paper 02

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

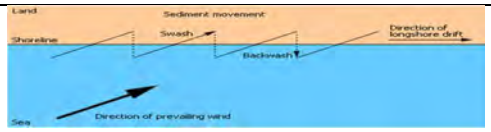
Question	Answer	Marks
1(a)	B – North-West Scotland All other answers clearly mistaken – AO1	**(1)**

Question	Answers	Marks
1(b)	Award one mark for explaining an appropriate human impact with further marks for detail of the process; In some areas (many) settlements have been built changing the original land-use (1) from forest to urban/farmland environments and/or whereas in other areas there have been fewer changes (1) Farming has cleared the original forest cover creating a 'new' rural landscape (1) where crops are grown to be sold (1) although some areas remain 'wild' (1) We have managed coastlines and rivers in order to stop flooding and protect people (1) so these areas are not as natural (1) whilst in other areas less management has taken place (1) Do not reward simple descriptive statements with no explanation e.g. 'houses have been built' as opposed to 'houses have been built changing the original landscape (1) reducing the amount of forest/farmland (1) **Accept any other appropriate response**	**(4)** (1 + 1) +(1+1)

Question	Answer	Marks
2 (a) (i)	C – from the north-west All other answers clearly and demonstrably wrong	**(1)**

Question	Answer	Marks
2 (a) (ii)	It increases it because more water = more energy (1) leads to more erosion and/or hydraulic action and/or more abrasion (1) **Accept any other appropriate response**	**(2)** 1+1

Question	Answer	Marks
2(a) (iii)	Expect a diagram of the process of longshore drift and how it creates a spit – this does not need to show explicitly the formation of a spit. Waves arrive at an angle (1) driving sediment up the beach through swash (1) this then returns perpendicular to the beach angle – backwash (1) leading to a net movement of sediment down the beach to form a spit (1) which is a depositional landform (1)	**(4)** 1+(1+1 +1)

	 **Accept any other appropriate response**	

Question	Answers	Marks
3 (a)	Because they use water to grow and therefore less water reached the river reducing peak discharge (1) Because tree roots act as conduits for water so less water will run over the surface reducing peak discharge (1) Because trees act as a canopy intercepting rain thus slowing down its delivery to the ground reducing peak discharge (1) **Accept any other appropriate response**	**1**

Question	Answers	Marks
3 (b)	Because it works reasonably well and/or more efficient than alternatives (1) due to its physical strength and/or good design and/or resilience (1) so protects people and property that would otherwise be damaged (1) causing significant income costs and/or threatening lives (1) **Accept any other appropriate response**	**2** **(1+1)**

Question	Answer	Marks
3(c)	Do not credit the naming of a river. **Sediment load** Generally increases downstream as more erosion takes place adding to load delivered from upstream (1) plus contribution of tributaries (1) also gets finer as consequence of attrition so mostly suspended load (1) Allow – as rivers enter the sea velocity may decrease (1) and deposit sediment load (1) **Velocity** Generally, it increases downstream despite decrease in gradient as channel becomes more efficient (1) detail of same e.g. more semi-circular (1) so less frictional drag on water thus faster (1) Allow – as water enters the sea velocity may decrease (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question	Indicative content
4	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Forestry is not especially profitable so, given the choice landowners will opt for different land-uses where they can • High ground is often too wet and too cold for productive forests • Much of Scotland's higher areas devoted to grouse moors/deer stalking thus deforested • It is also inaccessible therefore expensive to extract timber and timber products from remote mountainous regions with poor infrastructure • National variations explained by the above factors – Wales and Scotland are much more mountainous than England • Same plays out on a local scale as with the distribution in and around Fort William • Slight increase probably reflects expense of importing timber • This might also stimulate further investment in forestry **AO4 (4 marks)** • At a local scale on the map there is a close relationship between topography and forest cover • There is no forest on the highest ground, e.g the >1000 m peaks in the south-east corner • Some might note the Killiechonate 'Forest' (but old meaning of forest) • It tends to occupy the steeper valley side slopes – the sharp boundaries suggest that much of it is plantation forestry • Variation in the UK is considerable – this part of Scotland looks to be a little more than 18% • Lowest figure in England is significant

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Question number	Answer	Marks
5 (a) (i)	D –London All other answers demonstrably mistaken – see Figure 5	**(1)**

Question number	Answer	Marks
5(a) (ii)	The middle value of the nine regions so; -21.5 - accept 21.5 **Do not accept 'south west'**	**(1)**

Question number	Answer	Marks
5 (b)	Award one mark for basic reason and a second through an extension which might be an application of that idea. Do not credit the motives (push/pull factors) for migration unless they are used to explain variation in numbers of migrants in different locations e.g. growth of London. Population will have increased but unevenly (1) because some places will have had more job opportunities than others e.g London (1) The age structure of the population will have changed becoming younger (1) because migrants seeking work and/or students are mostly in younger age cohorts (1) The ethnic structure of the population will have changed becoming more diverse (1) especially in large cities which have more job opportunities for migrants (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
6 (a)(i)	They are very different (1) MK has much larger 25-44 (working) population (1) but fewer 55+ (1) and fewer 15-24 (1) but more 0-14 (1) gender balance similar (1) allow a mark for supporting data e.g. a percentage difference between two cohorts (1) **Do not credit explanation** **Accept any other appropriate response**	**(3)** 1+1+1

Question number	Answer	Marks
6 (a)(ii)	Award one mark for the correct method and one mark for the correct solution to one decimal place 554,500 – 462,400 = 92,100 92,100 /462,400 x100 = 19.92 = **19.9%**	**(2)** 1+1

Question number	Answer	Marks
6 (b)	Much depends on the chosen city (expect London and Birmingham to dominate) Accept answers that are relevant to **either** site **or** situation but not in the correct place on the question paper e.g. comments about situation under the 'Site' heading. Allow to 4 marks answers which reference location in general without any clear distinction between site and situation. **Site** Estuary site allowing access to river trade and markets (1) so increasing economic growth (1) Bridging point so nodal point for routes allowing markets to develop (1) and then multiplier effect (1) Dry-point site on slightly raised ground (1) so avoiding flood risk (1) Defensive site on higher ground (1) so point of safety for administration/markets (1) **Situation** Position relative to other places such as the continent of Europe (1) which will promote trade (1) Position relative to natural resources such as coalfields/iron ore (1) so important for economic growth (1) **Accept any other appropriate response**	**(4)**

Question number	Answer	Marks
6 (c)	Much depends on the chosen city (expect London and Birmingham to dominate) Award one mark for identifying a basic reason for contrasts and a further mark for expansion/application of that idea linking it to inequality. Deindustrialisation leading to job losses in some parts of the city and reduction in incomes (1) which reduces tax income for local authorities who have less money to spend on education and health services (1) Lack of government spending (austerity) has reduced spending on services (1) including education/health services thus increasing inequality (1) In-migration of wealthy foreigners has increased incomes in some parts of a city (1) whereas other areas of social housing have seen average incomes decline (1) **Accept any other appropriate response**	**(4)** (1+1) + (1+1)

Question	Indicative content
7	**AO3 (4 marks) / AO4 (4 marks)** **AO3 (4 marks)** • Direction of causation is not clear • Unclear how large cities would be evaluated in 'healthy' high street survey e.g London • Unhealthy high streets as much a consequence of deprivation as they are a cause • Retailers abandon poorer areas first shutting down outlets which have low rental value • That is a consequence of falling demand but also changes in retailing (on-line shopping) • So high streets dying everywhere, even in affluent areas • Life expectancy closely related to income deprivation • Growth of endogenous lifestyle causes of death e.g drugs, alcohol abuse, smoking • Deindustrialisation and government policies possible causes, the first unequivocally, the second more contentious • Last election results in 'red wall' constituencies a consequence • Current governments 'levelling up' promises a consequence **AO4 (4 marks)** • There is a clear north/south divide in terms of life expectancy but also a rural/urban contrast • However, small areas of 'worst' in the south too, including parts of London and coastal Essex • Unhealthy and healthy towns defined by types of retail and service outlets • Relationship with deprivation stated in text and clear on map • Three of 'worst' places are coastal • All five located in 'worst' areas • No information of where the 'healthiest' high streets might be

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because they are all 'stakeholders'/'players' (1) but might have contrasting view and or a wide range of views (1) Because they are all local (1) and so have knowledge of the issue (1) Because they have different life experiences and (1) therefore different opinions (1) Because they are different ages and (1) therefore different opinions (1) Because the students wanted different views (1) so that there was a more representative/reliable overview (1) **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
8 (a) (ii)	Award one mark for a reasonable explanatory point why an identifiable group might be 'useful to this enquiry'. Possible suggestions include, environmentalists, visitors, locals who do not live close to the coast, young people or farmers. Environmentalists will have a view about the impact on local habitats/biosphere (1) without any obvious financial axe to grind or bias (1). Tourists will have a view because the town obviously has some dependency on tourism (1) so their views would be important e.g. they may want the beach to be protected (1) Young people in the town will have a view because it will affect them most (1) in the future and/or they currently use the beach most (1). Local politicians will have a view about the cost/benefits (1) and may consider their popularity/electability is dependent on their stated views (1). Farmers would be concerned about loss of land (1) and risk to livestock and income (1). People who own property close to the beach (1) will have views about the potential loss of the value of their homes (1).	**(2)** (1+1)

	Do not credit development of an existing interviewee e.g. 'shop owner' or 'retired elderly resident' unless a very clear differentiation is made e.g. 'homeowner'. **Allow any other appropriate response**	

Question number	Answer	Marks
8 (a) (iii)	Award **one** mark for identifying the type of data secondary data might generate and suggesting how it might 'help' the enquiry. Allow an implicit rather than explicit identification of a secondary data source as in 'we collected secondary data about the population structure of the town' Research on the coastal management plan for this town from government agencies (1) to help with questions for planning officer and others (1) Use of old maps/newspaper articles/photographs (1) to research changes in the coastline to help understand current coastal management (1) Use of current maps/GIS (1) to plan quantitative data collection e.g. choice of sites (1) Population data and/or census data or similar demographic data (1) to help identify the groups to target for primary data collection (1) **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
8 (a) (iv)	Award **one** mark for identifying a basic reason for disagreement which is likely to be based on their vested interests or their job e.g. the Planning Officer and a further mark for its extension. The focus needs to be implicitly and/or explicitly focussed on one or more of the interviewees comments. Different roles in the process (1) e.g. the planning officer is working for the council and has a vested interest in the plans being successful (1) Financial interests will be central to those with property affected by coastal erosion (1) as with the café owner who stands to lose a great deal if tourism declines (1)	**(4)** (1+1) + (1+1)

	Residents will have varied views according to their view/perception of the town (1) as illustrated by the cynical views of the elderly resident hinting at corruption (1) A reduction in spending on services means they deteriorate (1) leading to a spiral of decline (1) Protecting the coastline is a lost cause in the long run (1) so short-term strategies are a waste of money (1) Allow explanations based on **one** opinion rather than reasons why they 'did not agree' but limit to 2 marks in total as in 1. The café owner wants to protect her business because it is threatened 2. The elderly resident wants the council to spend more on services **Allow any other appropriate response**	

Question number	Answer	Marks
9 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because they are all 'stakeholders'/'players' (1) but might have contrasting view and or a wide range of views (1) Because they are all local (1) and so have knowledge of the issue (1) Because they have different life experiences and (1) therefore different opinions (1) Because they are different ages and (1) therefore different opinions (1) Because the students wanted different views (1) so that there was a more representative/reliable overview (1) **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
9 (a) (ii)	Award one mark for a reasonable explanatory point why an identifiable group might be 'useful to this enquiry'. Possible suggestions include, environmentalists, visitors, locals who do not live close to the river, young people or farmers. Environmentalists will have a view about the impact on local habitats/biosphere (1) without any obvious financial axe to grind or bias (1). Tourists will have a view because the town obviously has some dependency on tourism (1) so their views would be important e.g. they may want the town centre to be protected (1) Young people in the town will have a view because it will affect them most (1) in the future and/or they currently use the floodplain most (1). Local politicians will have a view about the cost/benefits (1) and may consider their popularity/electability is dependent on their stated views (1). Farmers would be concerned about loss of productive land (1) and risk to livestock and income (1). People who own property close to the town centre (1) will have views about the potential loss of the value of their homes (1). Do not credit development of an existing interviewee e.g. 'shop owner' or 'retired elderly resident' unless a very clear differentiation is made e.g. 'homeowner'. **Allow any other appropriate response**	**(2)** (1+1)

Question number	Answer	Marks
9 (a) (iii)	Award **one** mark for identifying the type of data secondary data might generate and suggesting how it might 'help' the enquiry. Allow an implicit rather than explicit identification of a secondary data source as in 'we collected secondary data about the population structure of the town' Research on the flood management plan for this town from government agencies (1) to help with questions for planning officer and others (1) Use of old maps/newspaper articles/photographs (1) to research previous flood events to help understand current coastal management (1)	**(2)** (1+1)

	Use of current maps/GIS (1) to plan quantitative data collection e.g. choice of sites (1) Population data and/or census data or similar demographic data (1) to help identify the groups to target for primary data collection (1) **Allow any other appropriate response**	

Question number	Answer	Marks
9 (a) (iv)	Award **one** mark for identifying a basic reason for disagreement which is likely to be based on their vested interests or their job e.g. the Planning Officer and a further mark for its extension. The focus needs to be implicitly and/or explicitly focussed on one or more of the interviewees comments. Different roles in the process (1) e.g. the planning officer is working for the council and has a vested interest in the plans being successful (1) Financial interests will be central to those with property affected by flooding (1) as with the café owner who stands to lose a great deal if tourism declines (1) Residents will have varied views according to their view/perception of the town (1) as illustrated by the cynical views of the elderly resident hinting at corruption (1) A reduction in spending on services means they deteriorate (1) leading to a spiral of decline (1) Flood defences are a lost cause in the long run (1) so short-term strategies are a waste of money (1) Allow explanations based on **one** opinion rather than reasons why they 'did not agree' but limit to 2 marks in total as in 3. The café owner wants to protect her business because it is threatened 4. The elderly resident wants the council to spend more on services **Allow any other appropriate response**	**(4)** (1+1) + (1+1)

Question number	Answer	Marks
10 (a) (i)	C convenient E friendly These two have the largest font on Figure 9	**(2)** (1+1)

Question Number		Indicative content
10 (a) (ii)		**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Random selection of residents may lead to unreliable results • Saturday morning may not be a typical cross-section of the population • It is unknown what the age range of residents asked was • It is unknown if residence was established – might some be visitors especially in summer? • Some word choices not clearly positive or negative – might be either e.g. 'changing' or 'old'. • 'Convenient' likely to reflect motive or being in the town (e.g shopping on a Saturday morning • Some students may not have been taking this seriously e.g. 'fun' • Hard to draw meaningful conclusions from such a narrow base of responses • Student responses based on a 'snapshot' of mostly(?) first impressions – residents have more knowledge and also more inclined to be positive about their own town • However, there are obvious contrasts here that present a useful overview. **AO4** • Students responses mostly very negative – top words include 'dark, dirty and deprived'. • Only two clearly positive words in their responses – cool' and 'fun' • Residents much more positive with 'convenient and friendly' as the two top choices followed by 'tidy and clean' • But residents less consistent with more negative words than students have positives e.g. 'threatening, deprived, dirty, grim, unsafe' • Some obvious variation of view in both groups e.g. residents have both 'unsafe' and 'safe' whilst students have both 'cool' and 'fun' • Very little overlap (words in common) although 'deprived, dark, threatening and old' feature on both lists.
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a) (i)	C = tidy E = friendly These two have the largest font on Figure 11	**(2)** (1+1)

Question Number		Indicative content
11 (a)(ii)		**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Random selection of residents may lead to unreliable results • Saturday morning may not be a typical cross-section of the population • It is unknown what the age range of residents asked was • It is unknown if residence was established – might some be visitors especially in summer? • Some word choices not clearly positive or negative with – might be either e.g. 'quiet' or 'old'. • 'Community' likely to reflect history of residence and not the environment • Some students may not have been taking this seriously e.g. 'rubbish' • Hard to draw meaningful conclusions from such a narrow base of responses • Student responses based on a 'snapshot' of mostly(?) first impressions – residents have more knowledge and also more inclined to be positive about their own village • However, there are obvious contrasts here that present a useful overview. **AO4** • Students responses mostly negative or equivocal – top words include 'boring, quiet, dead'. • However, a few clearly positive words in their responses – 'pretty' and 'picturesque' • Residents much more positive with 'Friendly and community' as the two top choices followed by 'tidy' • But residents less consistent with more negative words than students have positives e.g. 'expensive, noisy, dirty, unsafe' • Some obvious variation of view in both groups e.g. residents have both 'unsafe' and 'safe' whilst students have both 'pretty' and 'rubbish' • Very little overlap (words in common) although 'rich' on one list and 'expensive' on the other might be claimed as such.
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1GB0/02**

Geography B

PAPER 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 78.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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Q:1/1/1/1/1/1/1/1/1

P 7 0 8 5 4 A 0 1 3 2

Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Identify which **one** of the following is a region of the UK which has an upland glaciated landscape.

(1)

☒ **A** South-east England

☒ **B** North-west Scotland

☒ **C** East of England

☒ **D** South-west England

(b) Explain **two** ways in which human activities result in distinctive landscapes.

(4)

1 .....

.....

.....

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2 .....

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(Total for Question 1 = 5 marks)

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Coastal Change and Conflict

2 (a) Study Figure 1 which is a photograph of a coastal environment in South Wales.



Figure 1

(i) Identify which **one** of the following is the best description of wave direction.

(1)

- ☒ **A** from the south-west
- ☒ **B** from the east
- ☒ **C** from the north-west
- ☒ **D** from the west

(ii) Explain **one** way in which wave height affects the rate of coastal erosion.

(2)

.....

.....

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(iii) Explain **one** reason why wave direction is important in the formation of spits.

You may use a diagram to help your answer.

(4)

(Total for Question 2 = 7 marks)

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River Processes and Pressures

3 (a) State **one** reason why planting trees can reduce the risk of river flooding.

(1)

(b) Explain **one** benefit of using hard engineering to manage flood risk.

(2)

(c) For a named UK river, explain why sediment load and velocity change along its course.

(4)

Named river: .....

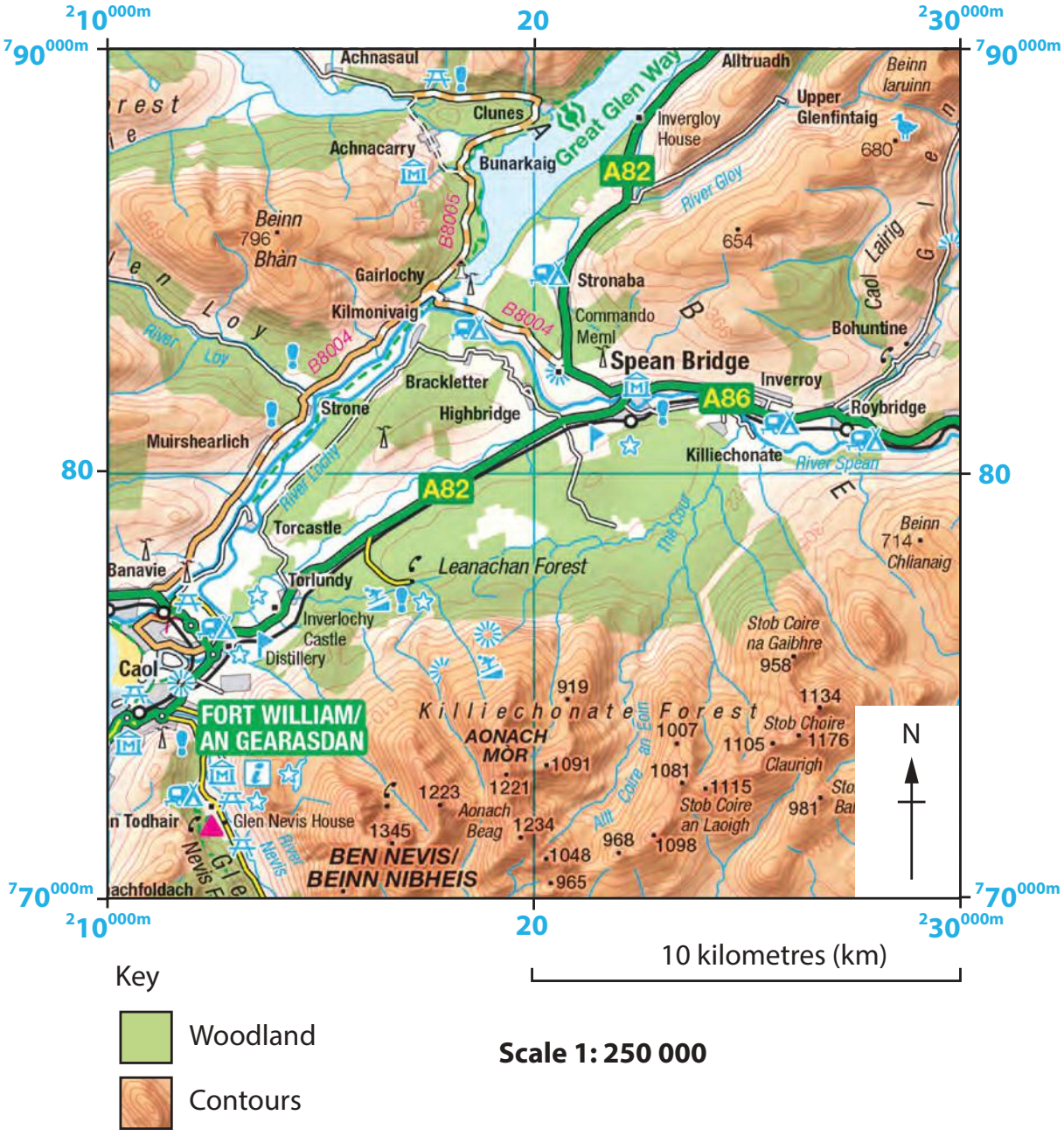
Sediment load

Velocity

(Total for Question 3 = 7 marks)

Investigating a UK Geographical Issue

4 Analyse Figure 2 which is a map extract (1:250 000) and information about the distribution of forested areas at a national and a local scale.



Key

Woodland

Contours

Scale 1: 250 000

- 13% of the United Kingdom is woodland: this is the lowest figure for any European country.
- The amount of woodland varies across the home nations, with England the lowest at 10% and Scotland the highest at 18%.
- Much of this is plantations of evergreens.
- The UK is, after China, the largest importer of timber and timber products.
- Forestry gives a relatively low profit compared to agriculture and other land uses.

Figure 2

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Assess the reasons why woodland is unevenly distributed at both a national and a local scale.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 3 which shows the percentage (%) fall in the Gross Domestic Product (GDP) of English regions between January and June 2020.

English regions	Percentage (%) fall in GDP between January and June 2020
North East	–18.4
North West	–23.9
Yorkshire and The Humber	–18.4
East Midlands	–21.1
West Midlands	–24.3
East of England	–24.4
London	–15.5
South East	–22.6
South West	–21.5

Figure 3

(i) Identify which **one** of the following regions had the smallest percentage (%) fall in its GDP.

(1)

☒ **A** North West

☒ **B** East Midlands

☒ **C** East of England

☒ **D** London

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(ii) Calculate the median percentage fall in GDP for English regions.

(1)

.....%

(b) Explain **two** ways in which international migration has changed the population geography of the UK.

(4)

1 .....

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.....

.....

2 .....

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.....

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Total for Question 5 = 6 marks

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6 (a) Study Figure 4 which shows the population structure of Milton Keynes (2017) compared to that of England and Wales.

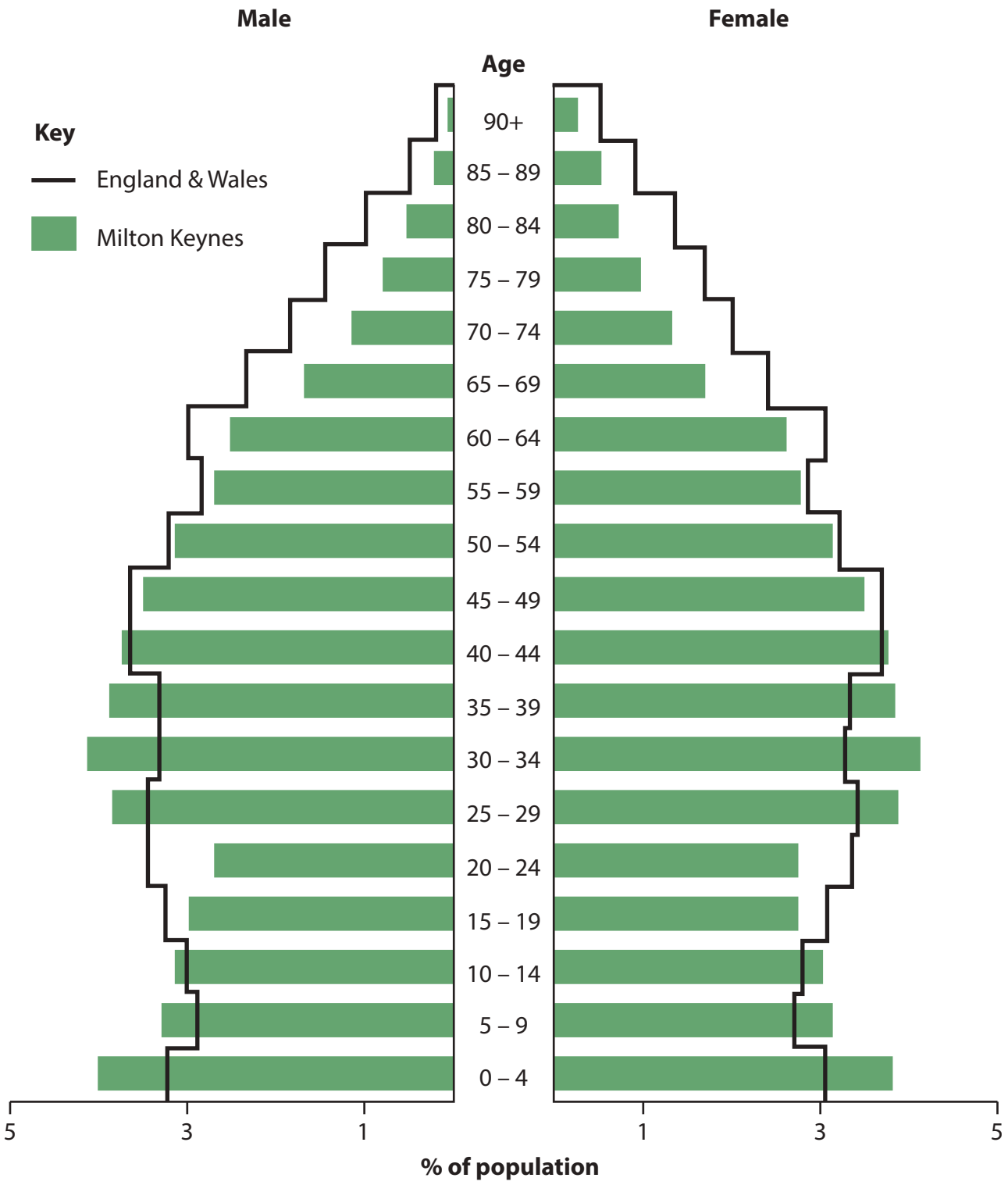


Figure 4

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(i) Compare the population structure of Milton Keynes with that of England and Wales.

(3)

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(ii) Study Figure 5 below which shows the population growth of Milton Keynes between 2002 and 2020.

2002	462,400
2020	554,500

Figure 5

Calculate the percentage (%) increase in the population of Milton Keynes between 2002 and 2020.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

.....%

(b) For a UK city that you have studied, explain the importance of its site and situation for its growth and development.

(4)

UK city: .....

Site

.....

.....

.....

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Situation

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(c) For a UK city that you have studied, explain **two** reasons why there are contrasting levels of inequality in different parts of this city.

(4)

UK city: .....

1 .....

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2 .....

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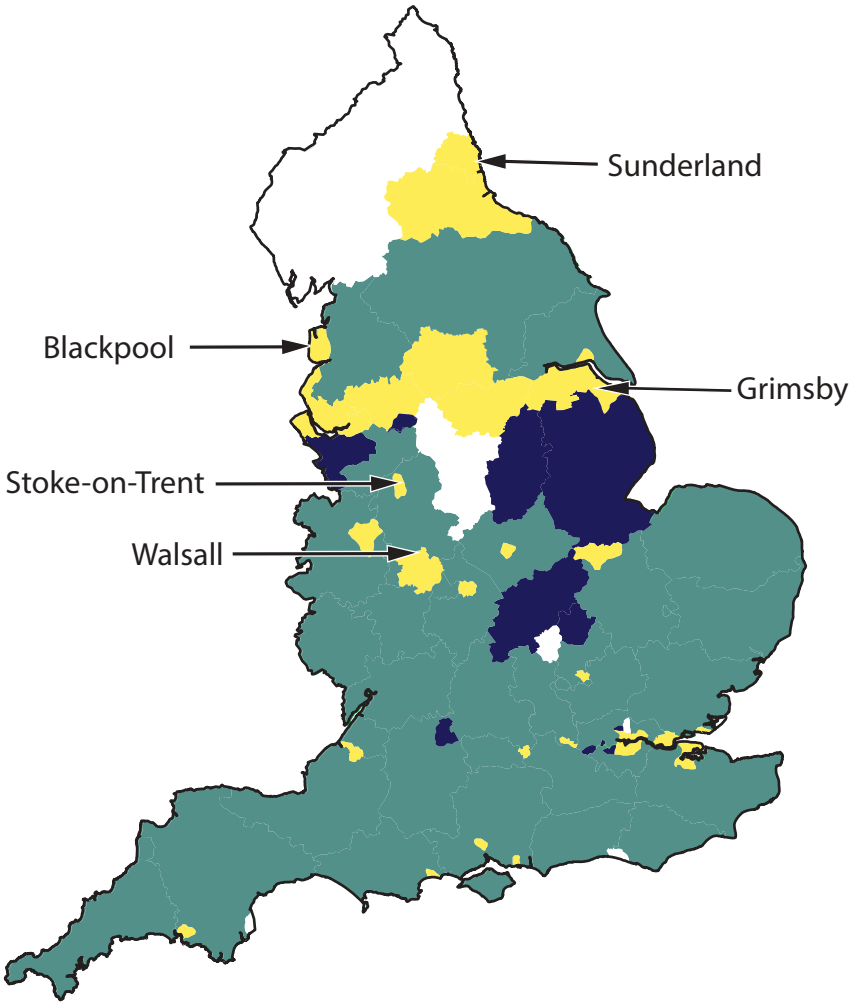
(Total for Question 6 = 13 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 6 which shows the location of England's five 'unhealthiest high streets' and life expectancy ranked from best to worst.



- The Royal Society for Public Health ranked the high streets that were most unhealthy as those with more payday lenders, bookmakers, tanning salons and fast food outlets.
- High street outlets that were considered healthy included leisure centres, health services, libraries, pubs, museums and art galleries.

Figure 6

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Assess the possible causes and consequences of variations in the health of high streets.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided.

If you answer Question 8 put a cross in the box ☒ .

Investigating Coastal Change and Conflict

8 (a) A group of students decided to conduct a series of interviews to collect data about the costs and benefits of coastal management methods.

They interviewed three people, asking them if they thought coastal management was worthwhile: a local planning officer, a retired elderly resident and the owner of a café close to the beach. Their answers are shown below.

Planning officer

'The council has invested more than £12 million on beach defences, with much of that money coming from the Department for the Environment. We have the complete support of the local community and with work completed six months ago, we are happy that it is money well spent.'

Retired elderly resident

'The services in this town are dreadful. The council spends money on trying to hold back natural processes whilst we have higher taxes and worse services. It isn't a surprise that many local politicians own businesses on the coast and spend our money to protect them.'

Café owner

'If this town is to survive we need tourists: all we have to offer is this fabulous beach. The locals spend nothing here and our businesses would disappear if we didn't protect it from erosion. Mind you, the council can't do much about global warming!'

Figure 7

(i) Explain **one** reason why the students selected these three people to interview.

(2)

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(ii) Suggest **one** reason why another group of people might have views about coastal defences that would have been useful to this enquiry.

(2)

Named group: .....

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(iii) Explain **one** way in which secondary data might have helped the students plan this enquiry.

(2)

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(iv) Suggest **two** reasons why the people interviewed did not agree about the benefits of spending money on coastal management.

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(Total for Question 8 = 10 marks)

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Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) A group of students decided to conduct a series of interviews to collect data about the costs and benefits of river flood protection measures.

They interviewed three people, asking them if they thought flood protection was worthwhile: a local planning officer, a retired elderly resident and the owner of a café in the centre of the town. Their answers are shown below.

Planning officer

'The council has invested more than £12 million on flood defences, with much of that money coming from the Department for the Environment. We have the complete support of the local community and with work completed six months ago, we are happy that it is money well spent.'

Retired elderly resident

'The services in this town are dreadful. The council spends money on trying to hold back natural processes whilst we have higher taxes and worse services. It isn't a surprise that many local politicians own businesses in the town centre and spend our money to protect them from flooding.'

Café owner

'If this town is to survive we need tourists: all we have to offer is this "chocolate box" town centre. The locals spend nothing here and our businesses would disappear if we didn't protect them from flooding. Mind you, the council can't do much about global warming!'

Figure 8

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(2)

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(ii) Suggest **one** reason why another group of people might have views about flood defences that would have been useful to this enquiry.

(2)

Named group: .....

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(iii) Explain **one** way secondary data might have helped the students plan this enquiry.

(2)

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(iv) Suggest **two** reasons why the people interviewed did not agree about the benefits of spending money on flood defences.

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(Total for Question 9 = 10 marks)

TOTAL FOR SECTION C1 = 10 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 OR Question 11 in this section.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

If you answer Question 10 put a cross in the box ☐ .

Investigating Dynamic Urban Areas

10 (a) A group of 25 students carried out fieldwork, investigating environmental quality and the views of the quality of life in an urban environment. They carried out this research on a Saturday morning in June 2019.

Each student wrote down the five words that best described their first impressions of the town centre.

They then selected 20 residents at random and asked them to do the same and suggest five words that they thought best described their town centre.

The two sets of results are shown below on the 'Wordle' diagrams where the frequency with which a word was used is shown by the size of the font of that word: the more frequently a word used, the larger the font.

(Figure 9 shows the views of students; Figure 10 shows the views of the residents.)

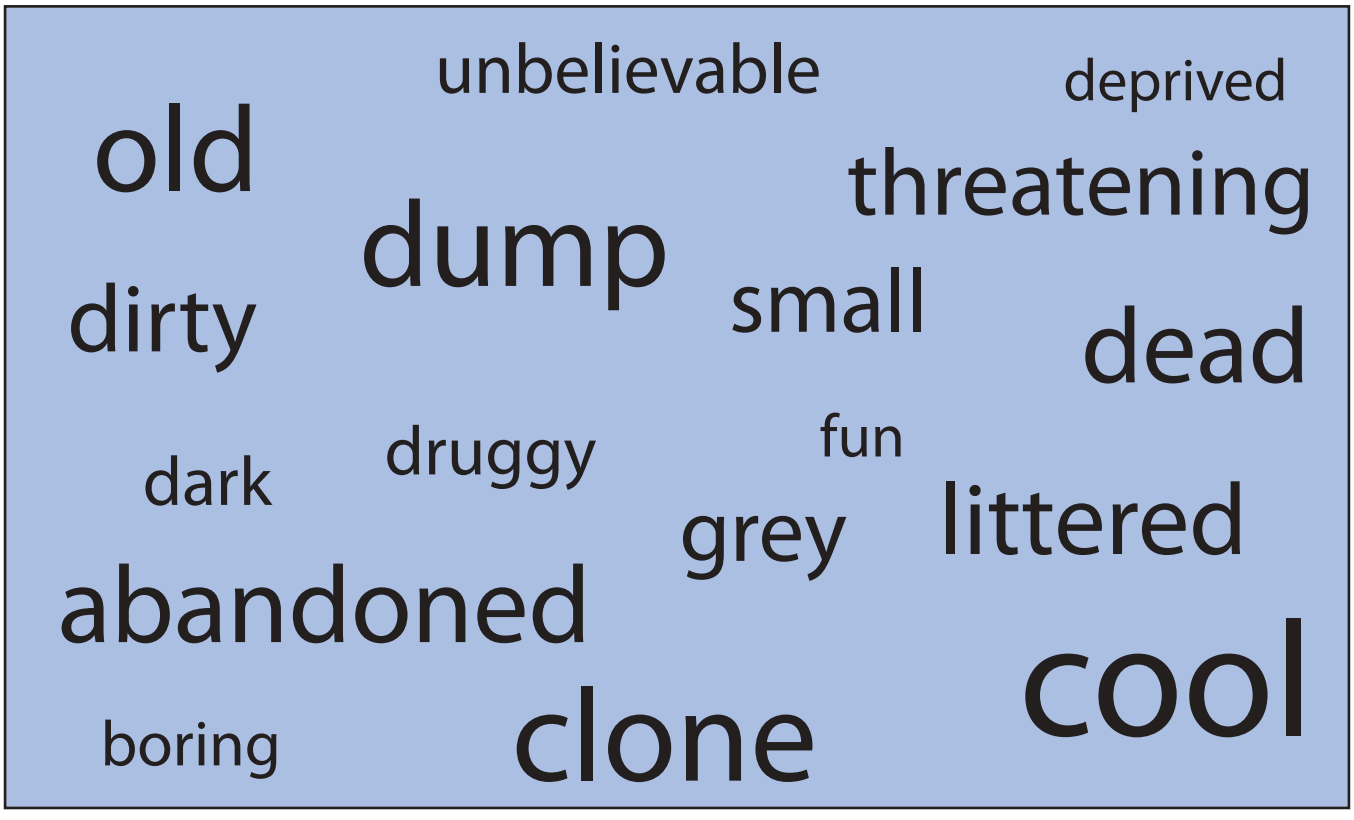


Figure 9

Students' views

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Figure 10

Residents' views

(i) Identify which **two** words were used most frequently by the residents when describing the town centre.

(2)

- ☒ **A** quiet
- ☒ **B** cool
- ☒ **C** convenient
- ☒ **D** noisy
- ☒ **E** friendly

(ii) Assess the possible reasons for the variations in the views of this town centre.

(8)

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(Total for Question 10 = 10 marks)

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Do not answer Question 11 if you already answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 (a) A group of 25 students carried out fieldwork, investigating environmental quality and the views of the quality of life in a rural settlement. They carried out this research on a Saturday morning in June 2019.

Each student wrote down the five words that best described their first impressions of this village.

They then selected 20 residents at random and asked them to do the same and suggest five words that they thought best described their village.

The two sets of results are shown below on the 'Wordle' diagrams where the frequency with which a word is used is shown by the size of the font of that word: the more frequently a word is used, the larger the font.

(Figure 11 shows the views of students; Figure 12 shows the views of the residents.)



Figure 11

Students' views

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Figure 12

Residents' views

(i) Identify which **two** words were used most frequently by the residents when describing the village.

(2)

- ☒ **A** quiet
- ☒ **B** old
- ☒ **C** tidy
- ☒ **D** incomers
- ☒ **E** friendly

(ii) Assess the possible reasons for the variations in the views of this village.

(8)

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(Total for Question 11 = 10 marks)

TOTAL FOR SECTION C2 = 10 MARKS
TOTAL FOR PAPER = 78 MARKS

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Figure 2: Ordnance Survey
Figure 6 sourced from: https://www.bbc.co.uk/news/health-46059306 OR Public Health England https://www.rsph.org.uk/about-us/news/britain-s-unhealthiest-high-streets-revealed-northern-towns-and-cities-top-the-rankings-for-unhealthiest-high-streets.html

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1GB0/02**

Geography B

PAPER 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 78.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

P70854A

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Q:1/1/1/1/1/1/1/1/1

P 7 0 8 5 4 A 0 1 3 2

Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Identify which **one** of the following is a region of the UK which has an upland glaciated landscape.

(1)

☒ **A** South-east England

☒ **B** North-west Scotland

☒ **C** East of England

☒ **D** South-west England

(b) Explain **two** ways in which human activities result in distinctive landscapes.

(4)

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(Total for Question 1 = 5 marks)

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Coastal Change and Conflict

2 (a) Study Figure 1 which is a photograph of a coastal environment in South Wales.



Figure 1

(i) Identify which **one** of the following is the best description of wave direction.

(1)

- ☒ **A** from the south-west
- ☒ **B** from the east
- ☒ **C** from the north-west
- ☒ **D** from the west

(ii) Explain **one** way in which wave height affects the rate of coastal erosion.

(2)

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(iii) Explain **one** reason why wave direction is important in the formation of spits.

You may use a diagram to help your answer.

(4)

(Total for Question 2 = 7 marks)

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River Processes and Pressures

3 (a) State **one** reason why planting trees can reduce the risk of river flooding.

(1)

(b) Explain **one** benefit of using hard engineering to manage flood risk.

(2)

(c) For a named UK river, explain why sediment load and velocity change along its course.

(4)

Named river: .....

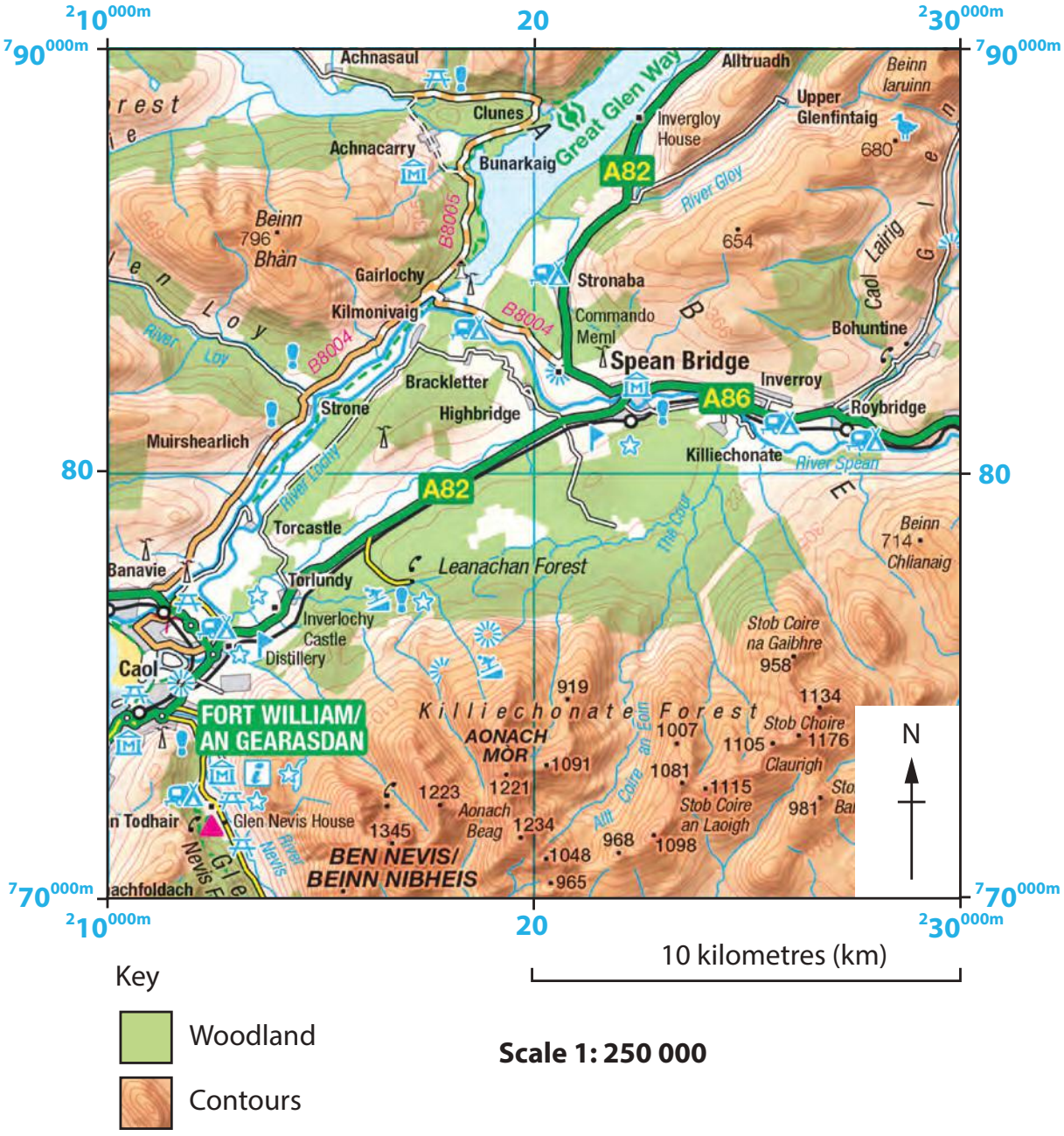
Sediment load

Velocity

(Total for Question 3 = 7 marks)

Investigating a UK Geographical Issue

4 Analyse Figure 2 which is a map extract (1:250 000) and information about the distribution of forested areas at a national and a local scale.



Key

Woodland

Contours

Scale 1: 250 000

- 13% of the United Kingdom is woodland: this is the lowest figure for any European country.
- The amount of woodland varies across the home nations, with England the lowest at 10% and Scotland the highest at 18%.
- Much of this is plantations of evergreens.
- The UK is, after China, the largest importer of timber and timber products.
- Forestry gives a relatively low profit compared to agriculture and other land uses.

Figure 2

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Assess the reasons why woodland is unevenly distributed at both a national and a local scale.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 3 which shows the percentage (%) fall in the Gross Domestic Product (GDP) of English regions between January and June 2020.

English regions	Percentage (%) fall in GDP between January and June 2020
North East	–18.4
North West	–23.9
Yorkshire and The Humber	–18.4
East Midlands	–21.1
West Midlands	–24.3
East of England	–24.4
London	–15.5
South East	–22.6
South West	–21.5

Figure 3

(i) Identify which **one** of the following regions had the smallest percentage (%) fall in its GDP.

(1)

☒ **A** North West

☒ **B** East Midlands

☒ **C** East of England

☒ **D** London

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(ii) Calculate the median percentage fall in GDP for English regions.

(1)

.....%

(b) Explain **two** ways in which international migration has changed the population geography of the UK.

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Total for Question 5 = 6 marks

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6 (a) Study Figure 4 which shows the population structure of Milton Keynes (2017) compared to that of England and Wales.

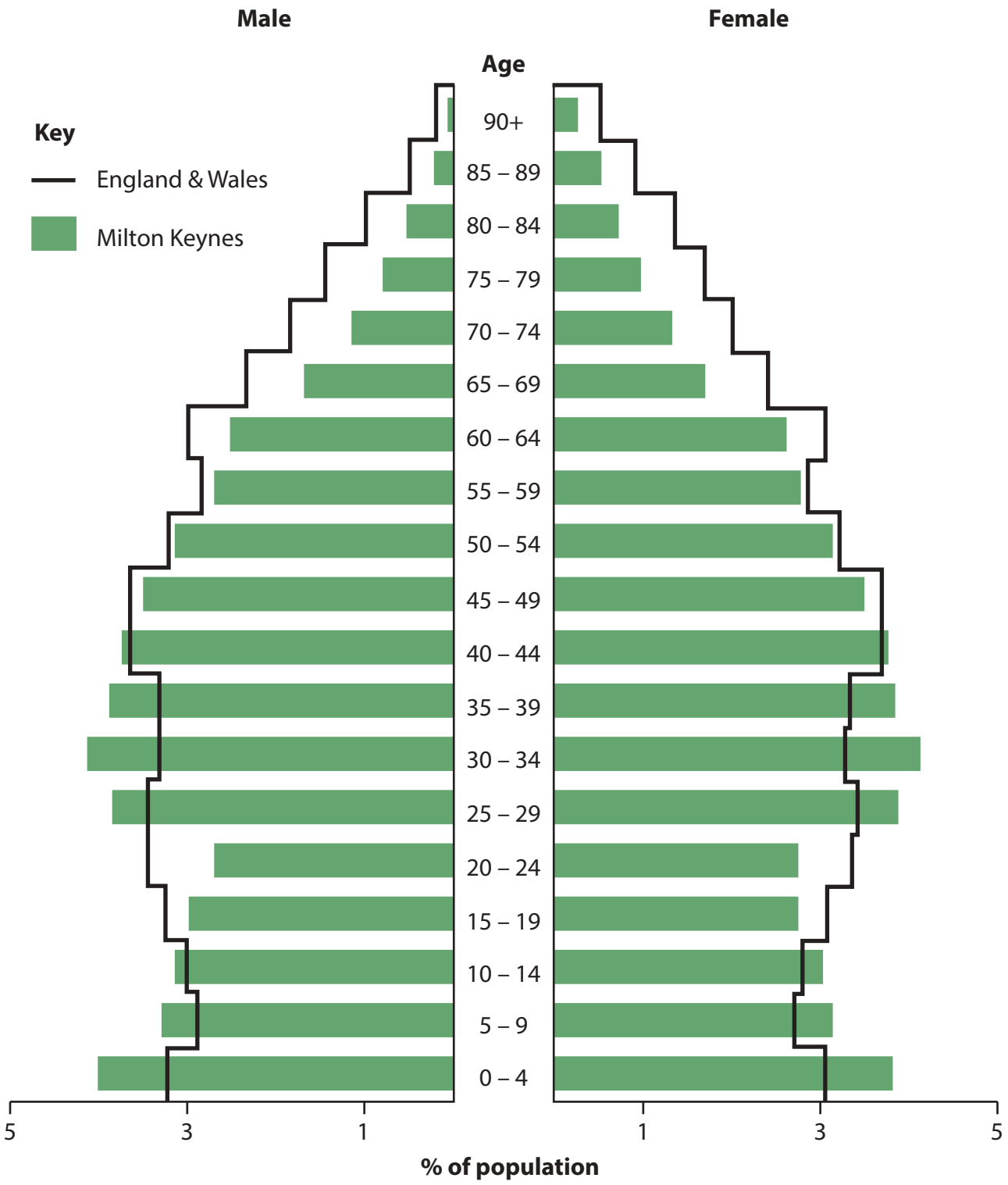


Figure 4

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(i) Compare the population structure of Milton Keynes with that of England and Wales.

(3)

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(ii) Study Figure 5 below which shows the population growth of Milton Keynes between 2002 and 2020.

2002	462,400
2020	554,500

Figure 5

Calculate the percentage (%) increase in the population of Milton Keynes between 2002 and 2020.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

.....%

(b) For a UK city that you have studied, explain the importance of its site and situation for its growth and development.

(4)

UK city: .....

Site

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Situation

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(c) For a UK city that you have studied, explain **two** reasons why there are contrasting levels of inequality in different parts of this city.

(4)

UK city: .....

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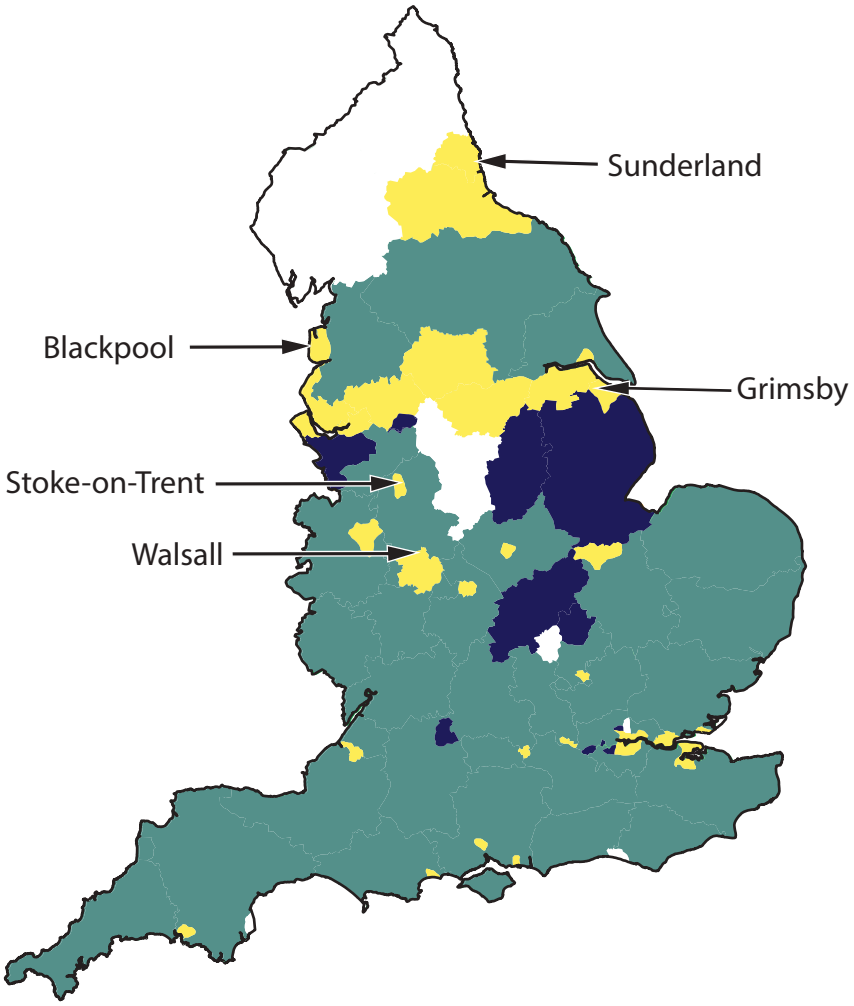
(Total for Question 6 = 13 marks)

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Investigating a UK Geographical Issue

In this question, up to four additional marks will be for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 6 which shows the location of England's five 'unhealthiest high streets' and life expectancy ranked from best to worst.



- The Royal Society for Public Health ranked the high streets that were most unhealthy as those with more payday lenders, bookmakers, tanning salons and fast food outlets.
- High street outlets that were considered healthy included leisure centres, health services, libraries, pubs, museums and art galleries.

Figure 6

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Assess the possible causes and consequences of variations in the health of high streets.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided.

If you answer Question 8 put a cross in the box ☒ .

Investigating Coastal Change and Conflict

8 (a) A group of students decided to conduct a series of interviews to collect data about the costs and benefits of coastal management methods.

They interviewed three people, asking them if they thought coastal management was worthwhile: a local planning officer, a retired elderly resident and the owner of a café close to the beach. Their answers are shown below.

Planning officer

'The council has invested more than £12 million on beach defences, with much of that money coming from the Department for the Environment. We have the complete support of the local community and with work completed six months ago, we are happy that it is money well spent.'

Retired elderly resident

'The services in this town are dreadful. The council spends money on trying to hold back natural processes whilst we have higher taxes and worse services. It isn't a surprise that many local politicians own businesses on the coast and spend our money to protect them.'

Café owner

'If this town is to survive we need tourists: all we have to offer is this fabulous beach. The locals spend nothing here and our businesses would disappear if we didn't protect it from erosion. Mind you, the council can't do much about global warming!'

Figure 7

(i) Explain **one** reason why the students selected these three people to interview.

(2)

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(ii) Suggest **one** reason why another group of people might have views about coastal defences that would have been useful to this enquiry.

(2)

Named group: .....

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(iii) Explain **one** way in which secondary data might have helped the students plan this enquiry.

(2)

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(iv) Suggest **two** reasons why the people interviewed did not agree about the benefits of spending money on coastal management.

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(Total for Question 8 = 10 marks)

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Do not answer Question 9 if you have answered Question 8.

If you answer Question 9 put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) A group of students decided to conduct a series of interviews to collect data about the costs and benefits of river flood protection measures.

They interviewed three people, asking them if they thought flood protection was worthwhile: a local planning officer, a retired elderly resident and the owner of a café in the centre of the town. Their answers are shown below.

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Retired elderly resident

'The services in this town are dreadful. The council spends money on trying to hold back natural processes whilst we have higher taxes and worse services. It isn't a surprise that many local politicians own businesses in the town centre and spend our money to protect them from flooding.'

Café owner

'If this town is to survive we need tourists: all we have to offer is this "chocolate box" town centre. The locals spend nothing here and our businesses would disappear if we didn't protect them from flooding. Mind you, the council can't do much about global warming!'

Figure 8

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(2)

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(ii) Suggest **one** reason why another group of people might have views about flood defences that would have been useful to this enquiry.

(2)

Named group: .....

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(iii) Explain **one** way secondary data might have helped the students plan this enquiry.

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(iv) Suggest **two** reasons why the people interviewed did not agree about the benefits of spending money on flood defences.

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(Total for Question 9 = 10 marks)

TOTAL FOR SECTION C1 = 10 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 OR Question 11 in this section.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

If you answer Question 10 put a cross in the box ☐ .

Investigating Dynamic Urban Areas

10 (a) A group of 25 students carried out fieldwork, investigating environmental quality and the views of the quality of life in an urban environment. They carried out this research on a Saturday morning in June 2019.

Each student wrote down the five words that best described their first impressions of the town centre.

They then selected 20 residents at random and asked them to do the same and suggest five words that they thought best described their town centre.

The two sets of results are shown below on the 'Wordle' diagrams where the frequency with which a word was used is shown by the size of the font of that word: the more frequently a word used, the larger the font.

(Figure 9 shows the views of students; Figure 10 shows the views of the residents.)

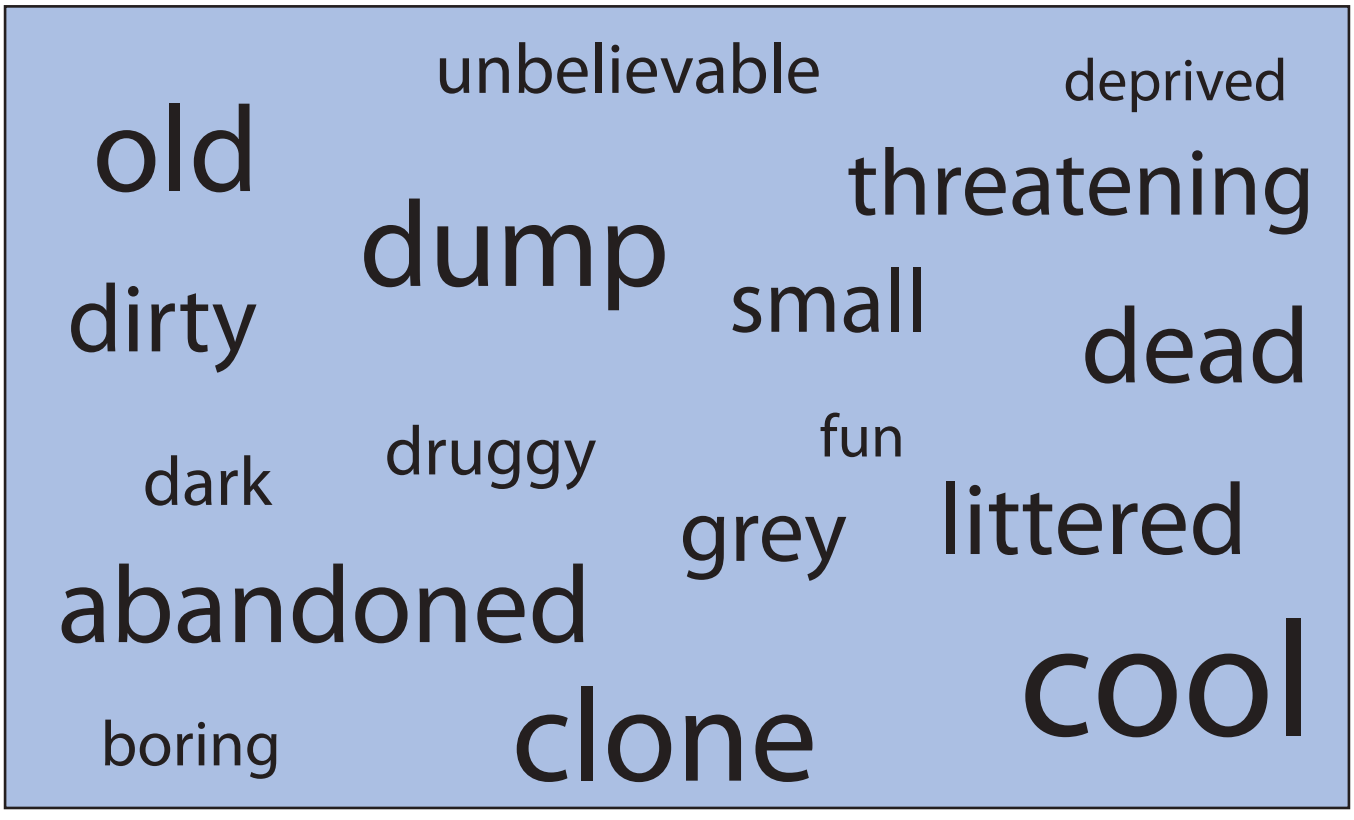


Figure 9

Students' views

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Figure 10

Residents' views

(i) Identify which **two** words were used most frequently by the residents when describing the town centre.

(2)

- ☒ **A** quiet
- ☒ **B** cool
- ☒ **C** convenient
- ☒ **D** noisy
- ☒ **E** friendly

(ii) Assess the possible reasons for the variations in the views of this town centre.

(8)

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(Total for Question 10 = 10 marks)

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Do not answer Question 11 if you already answered Question 10.

If you answer Question 11 put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 (a) A group of 25 students carried out fieldwork, investigating environmental quality and the views of the quality of life in a rural settlement. They carried out this research on a Saturday morning in June 2019.

Each student wrote down the five words that best described their first impressions of this village.

They then selected 20 residents at random and asked them to do the same and suggest five words that they thought best described their village.

The two sets of results are shown below on the 'Wordle' diagrams where the frequency with which a word is used is shown by the size of the font of that word: the more frequently a word is used, the larger the font.

(Figure 11 shows the views of students; Figure 12 shows the views of the residents.)



Figure 11

Students' views

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Figure 12

Residents' views

(i) Identify which **two** words were used most frequently by the residents when describing the village.

(2)

- ☒ **A** quiet
- ☒ **B** old
- ☒ **C** tidy
- ☒ **D** incomers
- ☒ **E** friendly

(ii) Assess the possible reasons for the variations in the views of this village.

(8)

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(Total for Question 11 = 10 marks)

TOTAL FOR SECTION C2 = 10 MARKS
TOTAL FOR PAPER = 78 MARKS

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Mark Scheme

Summer 2023

Pearson Edexcel GCE
In Geography (1GB0)
Paper 2

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Answer	Marks
1(a)	A – South-east England All other answers clearly mistaken	(1)

Question	Answers	Marks
1(b)	Award one mark for explaining an appropriate weathering process with one further mark for detail/development of the process; Frost weathering takes place when liquid water enters rock and/or fills joints and fissures (1) it then freezes and expands so fracturing the rock (1) Biological weathering may involve roots (1) that grow in rock fissures/fractures and force them apart as they grow (1) Rainfall is a very weak carbonic acid which reacts with some rocks (1) by dissolving them (I) Accept any other appropriate response	(2) (1+1)

Question	Answers	Marks
1(c)	Award one mark for explaining an appropriate impact of glacial processes with one further mark for detail/development of the impact; Glacial erosion has created cirques (1) and eroded them with abrasion and/or plucking processes (1) Glacial erosion from valley glaciers (1) creating U shaped troughs (1) Glacial deposition from melting and/or moving ice (1) has covered parts of lowland UK with glacial till (1) Accept any other appropriate response	(2) (1+1)

Question	Answer	Marks
2 (a)	Award one mark for explaining the role of joints and faults with one further mark for detail/development of how they facilitate erosion. Water and air are forced into these joints and faults (1) where they are compressed and tis pressure can fracture rocks further (1) Rock is (structurally) weak if jointed/faulted (1) so more likely to be eroded by wave action (1) Accept any other appropriate response	(2) (1+1)

Question	Answer	Marks
2 (b)	Award one mark for explaining the benefit of soft engineering with one further mark for detail/development of that benefit. It is relatively cheap (1) compared with hard engineering (1) It is less aesthetically intrusive (1) compared with hard engineering (1) Accept any other appropriate response	(2) 1+1

Question	Answer	Marks
2(c)	Award one mark each for the explanation of how a human activity has changed the coastal landscape and a further mark for a development of that idea. The focus should be on change to coastal landscapes but these should be interpreted broadly. Likely to be: Development of port industries e.g. oil refineries (1) leading to major changes in coastal landscape with building of docks and other facilities (1) Development of tourism and leisure e.g. hotels and caravan parks (1) leading to increasing pressure on fragile environmnets e.g. sand dunes Population growth in coastal areas e.g. for retirement (1) leading to growth in housing close to the coast (1) Changing agricultural practices (1) may lead to more run-off into the coastal environment e.g. nitrates Human activity is increasing global temperatures (1) which in turn increases sea-level and impacts on the coastal landscape (1) Accept any other appropriate response	(4) (1+ 1) + (1+1) Or (1+1+1) +1

Question	Answers	Marks
3 (a) (i)	B − Some trees are partially under water All other answers are demonstrably wrong − see photograph, depth not knowable nor velocity. One cannot know if houses are here or not.	1

Question	Answers	Marks
3 (a) (ii)	Because the water is brown (which is the sediment load) (1) Accept any other appropriate response	1

Question	Answer	Marks
3(b)	Award one mark for a basic explanation of a cost/benefit with one further mark for detail/development of that the cost/benefit. Costs may include: Hard engineering is very expensive both to build (1) and to maintain (1) Hard engineering is often unattractive (1) and incompatible with the natural environment (1) Hard engineering may protect town A (1) but displaces flood waters further downstream to town B which can make the overall risk greater (1) Benefits may include: Hard engineering can protect property (1) saving very large sums of money (1) Hard engineering can save lives and injuries (1) which inevitably impact very negatively on many others (1) It is more durable (1) and therefore might be cheaper in the long run (1) Accept any other appropriate response	(4) (1+1) (1+1)

Question	Indicative content
4	AO3 (4 marks) / AO4 (4 marks) Please note that the descriptors should be used to determine the appropriate mark and not a summation of two 4 point marked AOs. In other words, do not expect four points for 4 AO1 marks. Use the descriptors. Please note that candidates are not asked to explicitly differentiate between 'human' and 'physical' reasons. AO3 (4 marks) • Sea-level rise due to climate change makes coastal environments more vulnerable • Climate change may also increase frequency of storm events • Climate change may also increase severity of individual storms • More storms and more intense storms will increase river discharge and thus increase river flooding • Some regions are sinking (e.g. southern England) making sea-level rise worse • Population has increased so more people live on or close to floodplains increasing flood risk/impacts • Population growth has been most obvious in south-east England and London • Better technology and forecasting may have limited death toll AO4 (4 marks) • Very uneven over time 21st century = 17 out of total of 24 • Not much change before that time • Three of the most severe events since 2007 • Only 2 in previous 80 years • Two earlier events have highest loss of life − 1953 especially notable • Very low death rates in the 21st century events although 13 in 2007 • 3 of the five events involve coastal flooding/processes − 1928, 1953 and 2013 so multi-causal • Biggest event in terms of properties flooded was 2007 • Locations vary but south and south-east England features in all but one • Absence of western regions of England although Wales impacted by Storm Desmond

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1−3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of

		understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)	London much more diverse than the North East (1) White British largest in both areas (1) but less than 50% in London whilst 90%+ in the NE (1) Asian second largest in both regions (1) although once again London much larger than NE (1) notable contrast in 'White other' (1) Do not credit explanation Accept any other appropriate response	(3) 1+1+1

Question number	Answer	Marks
5 (b)	Award one mark for explanation of regional variations in ethnicity with one further mark for detail/development of that reason. Allow two extensions for 3 marks. Job availability is greater in cities (1) so more migrants in the larger cities such as London/Birmingham (1) Migrants seek living spaces where there are established communities of their ethnic group (1) so large cities with those communities with their specific cultural assets are attractive (1) Migrants arrive initially in large cities (1) so are inclined to seek work in these locations (1) Accept any other appropriate response	(4) (1+1) + (1+1) Or (1+1+1)+1

Question number	Answer	Marks
6 (a)(i)	B – 2009 All other answers are clearly wrong – please see Figure 4	(1)

Question number	Answer	Marks
6 (a)(ii)	Bath's growth rate fluctuates much more (or any version of this) (1) England and Wales had a more consistent growth/change (1) Do not credit explanation Accept any other appropriate response	(1)

Question number	Answer	Marks
6 (b)	Award one mark for the correct method and one mark for the correct solution to one decimal place 9,000 / 211,000 = 0.426 x100 = 4.26 = 4.3%	(2) 1+1

Question number	Answer	Marks
6 (c)	Award one mark for each identification of a legitimate strategy to improve urban living and a further mark for detail/development of that reason. Allow economic sustainability. Indicative content: much depends on the chosen city (expect London and Birmingham to dominate) Congestion charging reduces traffic in the centre of the city (1) this reduces the (air) pollution from vehicles (1) Bike rental also reduces traffic (1) with many resultant benefits for individuals and their families including reduced use of fossil fuels (1) Housing schemes (such as Bedzed) create communities with mixed-use (1) to reduce travel and therefore reduce carbon emissions (1) Subsidies for residential properties to use solar panels (1) and reduce fossil fuel usage (1) Design innovation promoting green roofs/ walls (1) to become net zero communities (1) Accept any other appropriate response	(4) (1+1) + (1+1)

Question number	Answer	Marks
6 (d)	Award one mark for a basic explanatory reason why some parts of the city have experienced growth and a further three marks for the development of that point. This can be either population growth or the growth of the built environment or the economy Indicative content: much depends on the chosen city (expect London and Birmingham to dominate) Growth in some areas because of redevelopment/regeneration (1) which has attracted inward investment (1) and this has created jobs (1) which leads to people moving in (1) Growth because of studentification (1) as universities have expanded (1) so halls of residence have been constructed (1) and more domestic and international students have moved in (1) New transport links (e.g. the Elizabeth line (1) make areas more accessible/easier to reach (1) so businesses grow and develop there (1) so people move into the area (1) Accept any other appropriate response	(4) (1) + (1+1+1)

Question	Indicative content
7	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • UK very highly urbanised because of demographic history • Rural − urban continuum makes distinction rather blurred • Demographic structure of an area depends on net migration − movements in and movements out • Rural areas often experience out-migration of the young e.g students and/or young seeking employment • Rural areas have fewer jobs and narrower range of jobs especially remote rural areas • In-migration to rural areas likely to be both retirement migration but also counter-urbanisation into the urban rural fringe • Commuting significant element in rural communities within range of large cities • Rural properties may be expensive making it hard for local population to remain especially in attractive areas • On the other hand moving out of cities might make financial sense for those trading urban properties for cheaper but larger rural properties • Cities also attract international migrants who are often of younger working age • The % of children driven by number of younger adults at family formation life stage hence higher in urban populations.

	AO4 (4 marks) • Rural populations are significantly older • Modal age rural = 55-60 whilst modal age urban = 30-34 • Large differences in most cohorts/categories • Urban % higher in all cohorts from 0-4 up to 40-44 • Rural % higher in all cohorts above 45-50 • Similar figures for 0-14 but suggestion of lower rural BR in 0-4 cohort • Absolute numbers mean larger population in every cohort in urban areas e.g 5% of 47 million = 2.35 million whereas 5% of 10 million – 0.5 million • England very highly urbanised

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because it is very close to the school (1) so no time lost in getting to the location (1) Because it is a safe location (1) 'weather was calm' (1) Because the beach had engineering (1) both hard and soft (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
8 (a) (ii)	Award one mark for a reasonable explanation and a second mark for the development of that point. Because the profiles might be different (1) because of different weather/wave conditions (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
8 (a) (iii)	Award one mark for identifying one reasonable conclusion and a further mark for its extension by use of Figure 7. Comments on a difference in profiles (1) supported by evidence/data drawn from Figure 7 (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
8 (a) (iv)	Award one mark for explaining a basic reason why secondary data might be helpful and a further mark for developing that idea. An OS map would be useful to pre-plan the locations for the transects (1) especially because you are returning months later (1) Material from those responsible for coastal management (1) to discover the history of beach management (1) A meteorological website to check on the autumn weather (1) which may or my not have affected the beach profile (1) Allow any other appropriate response	(4) (1+1) + (1+1)

Question Number		Indicative content
8 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Assessment should clearly cover the primary data collected on a beach • Relationship with possible enquiry question either implicit or explicit • Fitness for purpose of methods clearly related to coastal management • Attempt to weigh up relative significance of both the strengths and the weaknesses that extends beyond description • Assessment takes overarching view of quality of methods in terms of overall accuracy • Evaluation should also include references to overall reliability AO4 • Strengths might include ease of a data collection in terms of safety • …….and/or accessibility • …….or legality of access • …….or range of data collected in different coastal environments e.g. variation between sites/profiles • ……or relatively simple to carry out with uncomplicated equipment • Weaknesses might be opposites of above but also.. • ….insufficient time to carry out data collection • Accuracy of data collection referenced • Reliability of data collection referenced
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because it is very close to the school (1) so no time lost in getting to the location (1) Because it is a safe location (1) 'weather was calm' (1) Because the river had examples of engineering (1) in two places (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
9 (a) (ii)	Award one mark for a reasonable suggestion and a second mark for the development of that point. Because discharge might be different (1) because of different weather conditions(1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
9 (a) (iii)	Award one mark for identifying one reasonable conclusion and a further mark for its extension by use of Figure 8 Comments on a difference in sections of river (1) supported by evidence/data drawn from Figure 8 (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
9 (a) (iv)	Award one mark for explaining a basic reason why secondary data might be helpful and a further mark for developing that idea. An OS map would be useful to pre-plan the locations for the data collection (1) especially because you are returning months later so need to remember the locations (1)	(4) (1+1) + (1+1)

	Publications and reports (1) to discover the history of the hard engineering (1) A meteorological website to check on the autumn weather (1) which may or may not have affected the river discharge (1) Allow any other appropriate response	

Question Number		Indicative content
9 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Assessment should clearly include primary data collected on a river • Relationship with possible enquiry question either implicit or explicit • Fitness for purpose of methods clearly related to flood risk • Attempt to weigh up relative significance of both the strengths and the weaknesses that extends beyond description • Assessment takes overarching view of quality of methods in terms of overall accuracy • Assessment should also include references to overall reliability AO4 • Strengths might include ease of a data collection in terms of safety • …….and/or accessibility • …….or legality of access • …….or range of data collected in different river environments e.g. variation between sites • ……or relatively simple to carry out with uncomplicated equipment • Weaknesses might be opposites of above but also.. • ….insufficient time to carry out data collection • Accuracy of data collection referenced • Reliability of data collection referenced
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)

Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
10 (a)	One mark for basic explanatory reason and one mark for an extension of that. Given that centres will design their own fieldwork there will be a wide range of answers. We have been studying urban geography and deprivation (1) so carrying out fieldwork to investigate variations in a town is useful (1) We tied our enquiry to theory and/or case studies (1) that allowed us to predict what we might expect from our primary data research (1) We knew that we had accessible secondary data e.g census data (1) that would allow us to compare our results with official statistics (1) Do not penalise the absence of a named fieldwork location Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
10 (b)	Award one mark for basic point and a further mark for its extension. Obviously, responses depend on their own enquiry question, but they are obliged to have carried out a quantitative environmental quality survey and a qualitative measurement of perception of quality of life so expect; We used a Environmental Quality Survey form and selected sites in the town/urban area to measure it (1) this covered several aspects of the environment e.g. traffic noise producing quantitative data (1) We conducted a questionnaire of the public asking their views of the quality of life in the town/urban area (1) and recorded these with notes of the key points as qualitative data (1) Allow any other appropriate response	(4) (1+1)+ (1+1)

Question number	Answer	Marks
10 (c)	Award one mark for basic point and a further mark(s) for its extension. Expect a clear focus on the enquiry question. Environmental quality improved as you moved away from the town centre (1) although this was not consistent (1) explanation of inconsistency (1) Environment quality was worse in more deprived areas of the town/urban area (1) although this was not consistent (1) explanation of inconsistency (1) There were variations in resident views about the quality of life (1) according to their age/gender/ethnicity (1) detail of same (1) Allow any other appropriate response	(4) (1+1) + (1+1) or 1 + (1+1+1)

Question Number	Indicative content
10 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Random selection of residents may lead to unreliable results

		• Saturday morning may not be a typical cross-section of the population but better than a weekday • Accuracy of responses might be an issue = perhaps some did not take it seriously • No information about how residency was established – many of these might be visitors • Responses inevitably subjective – for example what constitutes 'anti-social behaviour'? • May be reliability issues if sample not representative of population as a whole • However, there are obvious contrasts here that present a useful overview. AO4 • There is not much disagreement over 'crime' - the majority do not think crime is an issue. • For 'noise' the majority of older people think noise and anti-social behaviour are problems, but the younger interviewees disagreed • There was also significant disagreement over 'safety' with the older population much more worried about their safety. • The first conclusion is unclear – there were many more young people interviewed than older people • The three questions/statements do not cover the whole range of 'living environment' measures • 70 questionnaires is a decent sized sample
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork

		findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	One mark for basic explanatory reason and one mark for an extension of that. Given that centres will design their own fieldwork there will be a wide range of answers. We have been studying rural deprivation (1) so carrying out fieldwork to investigate variations in a rural settlement is useful (1) We tied our enquiry to theory and/or case studies (1) that allowed us to predict what we might expect from our primary data research (1) We knew that we had accessible secondary data e.g census data (1) that would allow us to compare our results with 'official' statistics (1) Do not penalise the absence of a named fieldwork location Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
11 (b)	Award one mark for basic point and a further mark for its extension. Obviously, responses depend on their own enquiry question, but they are obliged to have carried out a quantitative environmental quality survey and a qualitative measurement of perception of quality of life so expect; We used a Environmental Quality Survey form and selected sites in the rural area to measure it (1) this covered several aspects of the environment e.g. traffic noise producing quantitative data (1) We conducted a questionnaire of the public asking their views of the quality of life in the village (1) and recorded these with notes of the key points as qualitative data (1) Allow any other appropriate response	(4) (1+1)+ (1+1)

Question number	Answer	Marks
11 (c)	Award one mark for basic point and a further mark for its extension. Expect a clear focus on the enquiry question; Environmental quality improved as you moved away from the village centre (1) although this was not consistent (1) reasons for inconsistency (1) Environment quality was worse in more deprived areas of the village (1) although this was not consistent (1) reasons for inconsistency (1) (1) There were variations in resident views about the quality of life (1) according to their age/gender/ethnicity (1) detail of variations (1) Allow any other appropriate response	(4) (1+1) + (1+1) or 1 + (1+1+1)

Question Number	Indicative content
11 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Random selection of residents may lead to unreliable results • Saturday morning may not be a typical cross-section of the population but better than a weekday • Accuracy of responses might be an issue = perhaps some did not take it seriously • No information about how residency was established – many of these might be visitors • Responses inevitably subjective – for example what constitutes 'anti-social behaviour'? • May be reliability issues if sample not representative of population as a whole • However, there are obvious contrasts here that present a useful overview. AO4 • There is not much disagreement over 'crime' - the majority do not think crime is an issue. • For 'noise' the majority of older people think noise and anti-social behaviour are problems, but the younger interviewees disagreed • There was also significant disagreement over 'safety' with the older population much more worried about their safety. • The first conclusion is unclear – there were many more young people interviewed than older people

		• The three questions/statements do not cover the whole range of 'living environment' measures • 70 questionnaires is a decent sized sample
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Mark Scheme

Summer 2023

Pearson Edexcel GCE
In Geography (1GB0)
Paper 2

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- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Answer	Marks
1(a)	A – South-east England All other answers clearly mistaken	(1)

Question	Answers	Marks
1(b)	Award one mark for explaining an appropriate weathering process with one further mark for detail/development of the process; Frost weathering takes place when liquid water enters rock and/or fills joints and fissures (1) it then freezes and expands so fracturing the rock (1) Biological weathering may involve roots (1) that grow in rock fissures/fractures and force them apart as they grow (1) Rainfall is a very weak carbonic acid which reacts with some rocks (1) by dissolving them (I) Accept any other appropriate response	(2) (1+1)

Question	Answers	Marks
1(c)	Award one mark for explaining an appropriate impact of glacial processes with one further mark for detail/development of the impact; Glacial erosion has created cirques (1) and eroded them with abrasion and/or plucking processes (1) Glacial erosion from valley glaciers (1) creating U shaped troughs (1) Glacial deposition from melting and/or moving ice (1) has covered parts of lowland UK with glacial till (1) Accept any other appropriate response	(2) (1+1)

Question	Answer	Marks
2 (a)	Award one mark for explaining the role of joints and faults with one further mark for detail/development of how they facilitate erosion. Water and air are forced into these joints and faults (1) where they are compressed and tis pressure can fracture rocks further (1) Rock is (structurally) weak if jointed/faulted (1) so more likely to be eroded by wave action (1) Accept any other appropriate response	(2) (1+1)

Question	Answer	Marks
2 (b)	Award one mark for explaining the benefit of soft engineering with one further mark for detail/development of that benefit. It is relatively cheap (1) compared with hard engineering (1) It is less aesthetically intrusive (1) compared with hard engineering (1) Accept any other appropriate response	(2) 1+1

Question	Answer	Marks
2(c)	Award one mark each for the explanation of how a human activity has changed the coastal landscape and a further mark for a development of that idea. The focus should be on change to coastal landscapes but these should be interpreted broadly. Likely to be: Development of port industries e.g. oil refineries (1) leading to major changes in coastal landscape with building of docks and other facilities (1) Development of tourism and leisure e.g. hotels and caravan parks (1) leading to increasing pressure on fragile environmnets e.g. sand dunes Population growth in coastal areas e.g. for retirement (1) leading to growth in housing close to the coast (1) Changing agricultural practices (1) may lead to more run-off into the coastal environment e.g. nitrates Human activity is increasing global temperatures (1) which in turn increases sea-level and impacts on the coastal landscape (1) Accept any other appropriate response	(4) (1+ 1) + (1+1) Or (1+1+1) +1

Question	Answers	Marks
3 (a) (i)	B − Some trees are partially under water All other answers are demonstrably wrong − see photograph, depth not knowable nor velocity. One cannot know if houses are here or not.	1

Question	Answers	Marks
3 (a) (ii)	Because the water is brown (which is the sediment load) (1) Accept any other appropriate response	1

Question	Answer	Marks
3(b)	Award one mark for a basic explanation of a cost/benefit with one further mark for detail/development of that the cost/benefit. Costs may include: Hard engineering is very expensive both to build (1) and to maintain (1) Hard engineering is often unattractive (1) and incompatible with the natural environment (1) Hard engineering may protect town A (1) but displaces flood waters further downstream to town B which can make the overall risk greater (1) Benefits may include: Hard engineering can protect property (1) saving very large sums of money (1) Hard engineering can save lives and injuries (1) which inevitably impact very negatively on many others (1) It is more durable (1) and therefore might be cheaper in the long run (1) Accept any other appropriate response	(4) (1+1) (1+1)

Question	Indicative content
4	AO3 (4 marks) / AO4 (4 marks) Please note that the descriptors should be used to determine the appropriate mark and not a summation of two 4 point marked AOs. In other words, do not expect four points for 4 AO1 marks. Use the descriptors. Please note that candidates are not asked to explicitly differentiate between 'human' and 'physical' reasons. AO3 (4 marks) • Sea-level rise due to climate change makes coastal environments more vulnerable • Climate change may also increase frequency of storm events • Climate change may also increase severity of individual storms • More storms and more intense storms will increase river discharge and thus increase river flooding • Some regions are sinking (e.g. southern England) making sea-level rise worse • Population has increased so more people live on or close to floodplains increasing flood risk/impacts • Population growth has been most obvious in south-east England and London • Better technology and forecasting may have limited death toll AO4 (4 marks) • Very uneven over time 21st century = 17 out of total of 24 • Not much change before that time • Three of the most severe events since 2007 • Only 2 in previous 80 years • Two earlier events have highest loss of life − 1953 especially notable • Very low death rates in the 21st century events although 13 in 2007 • 3 of the five events involve coastal flooding/processes − 1928, 1953 and 2013 so multi-causal • Biggest event in terms of properties flooded was 2007 • Locations vary but south and south-east England features in all but one • Absence of western regions of England although Wales impacted by Storm Desmond

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1−3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of

		understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Marks
5 (a)	London much more diverse than the North East (1) White British largest in both areas (1) but less than 50% in London whilst 90%+ in the NE (1) Asian second largest in both regions (1) although once again London much larger than NE (1) notable contrast in 'White other' (1) Do not credit explanation Accept any other appropriate response	(3) 1+1+1

Question number	Answer	Marks
5 (b)	Award one mark for explanation of regional variations in ethnicity with one further mark for detail/development of that reason. Allow two extensions for 3 marks. Job availability is greater in cities (1) so more migrants in the larger cities such as London/Birmingham (1) Migrants seek living spaces where there are established communities of their ethnic group (1) so large cities with those communities with their specific cultural assets are attractive (1) Migrants arrive initially in large cities (1) so are inclined to seek work in these locations (1) Accept any other appropriate response	(4) (1+1) + (1+1) Or (1+1+1)+1

Question number	Answer	Marks
6 (a)(i)	B – 2009 All other answers are clearly wrong – please see Figure 4	(1)

Question number	Answer	Marks
6 (a)(ii)	Bath's growth rate fluctuates much more (or any version of this) (1) England and Wales had a more consistent growth/change (1) Do not credit explanation Accept any other appropriate response	(1)

Question number	Answer	Marks
6 (b)	Award one mark for the correct method and one mark for the correct solution to one decimal place 9,000 / 211,000 = 0.426 x100 = 4.26 = 4.3%	(2) 1+1

Question number	Answer	Marks
6 (c)	Award one mark for each identification of a legitimate strategy to improve urban living and a further mark for detail/development of that reason. Allow economic sustainability. Indicative content: much depends on the chosen city (expect London and Birmingham to dominate) Congestion charging reduces traffic in the centre of the city (1) this reduces the (air) pollution from vehicles (1) Bike rental also reduces traffic (1) with many resultant benefits for individuals and their families including reduced use of fossil fuels (1) Housing schemes (such as Bedzed) create communities with mixed-use (1) to reduce travel and therefore reduce carbon emissions (1) Subsidies for residential properties to use solar panels (1) and reduce fossil fuel usage (1) Design innovation promoting green roofs/ walls (1) to become net zero communities (1) Accept any other appropriate response	(4) (1+1) + (1+1)

Question number	Answer	Marks
6 (d)	Award one mark for a basic explanatory reason why some parts of the city have experienced growth and a further three marks for the development of that point. This can be either population growth or the growth of the built environment or the economy Indicative content: much depends on the chosen city (expect London and Birmingham to dominate) Growth in some areas because of redevelopment/regeneration (1) which has attracted inward investment (1) and this has created jobs (1) which leads to people moving in (1) Growth because of studentification (1) as universities have expanded (1) so halls of residence have been constructed (1) and more domestic and international students have moved in (1) New transport links (e.g. the Elizabeth line (1) make areas more accessible/easier to reach (1) so businesses grow and develop there (1) so people move into the area (1) Accept any other appropriate response	(4) (1) + (1+1+1)

Question	Indicative content
7	AO3 (4 marks) / AO4 (4 marks) AO3 (4 marks) • UK very highly urbanised because of demographic history • Rural − urban continuum makes distinction rather blurred • Demographic structure of an area depends on net migration − movements in and movements out • Rural areas often experience out-migration of the young e.g students and/or young seeking employment • Rural areas have fewer jobs and narrower range of jobs especially remote rural areas • In-migration to rural areas likely to be both retirement migration but also counter-urbanisation into the urban rural fringe • Commuting significant element in rural communities within range of large cities • Rural properties may be expensive making it hard for local population to remain especially in attractive areas • On the other hand moving out of cities might make financial sense for those trading urban properties for cheaper but larger rural properties • Cities also attract international migrants who are often of younger working age • The % of children driven by number of younger adults at family formation life stage hence higher in urban populations.

	AO4 (4 marks) • Rural populations are significantly older • Modal age rural = 55-60 whilst modal age urban = 30-34 • Large differences in most cohorts/categories • Urban % higher in all cohorts from 0-4 up to 40-44 • Rural % higher in all cohorts above 45-50 • Similar figures for 0-14 but suggestion of lower rural BR in 0-4 cohort • Absolute numbers mean larger population in every cohort in urban areas e.g 5% of 47 million = 2.35 million whereas 5% of 10 million – 0.5 million • England very highly urbanised

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Answer	Marks
8 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because it is very close to the school (1) so no time lost in getting to the location (1) Because it is a safe location (1) 'weather was calm' (1) Because the beach had engineering (1) both hard and soft (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
8 (a) (ii)	Award one mark for a reasonable explanation and a second mark for the development of that point. Because the profiles might be different (1) because of different weather/wave conditions (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
8 (a) (iii)	Award one mark for identifying one reasonable conclusion and a further mark for its extension by use of Figure 7. Comments on a difference in profiles (1) supported by evidence/data drawn from Figure 7 (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
8 (a) (iv)	Award one mark for explaining a basic reason why secondary data might be helpful and a further mark for developing that idea. An OS map would be useful to pre-plan the locations for the transects (1) especially because you are returning months later (1) Material from those responsible for coastal management (1) to discover the history of beach management (1) A meteorological website to check on the autumn weather (1) which may or my not have affected the beach profile (1) Allow any other appropriate response	(4) (1+1) + (1+1)

Question Number		Indicative content
8 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Assessment should clearly cover the primary data collected on a beach • Relationship with possible enquiry question either implicit or explicit • Fitness for purpose of methods clearly related to coastal management • Attempt to weigh up relative significance of both the strengths and the weaknesses that extends beyond description • Assessment takes overarching view of quality of methods in terms of overall accuracy • Evaluation should also include references to overall reliability AO4 • Strengths might include ease of a data collection in terms of safety • …….and/or accessibility • …….or legality of access • …….or range of data collected in different coastal environments e.g. variation between sites/profiles • ……or relatively simple to carry out with uncomplicated equipment • Weaknesses might be opposites of above but also.. • ….insufficient time to carry out data collection • Accuracy of data collection referenced • Reliability of data collection referenced
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
9 (a) (i)	Award one mark for explaining the basic reason and second mark for a development of that. Expect; Because it is very close to the school (1) so no time lost in getting to the location (1) Because it is a safe location (1) 'weather was calm' (1) Because the river had examples of engineering (1) in two places (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
9 (a) (ii)	Award one mark for a reasonable suggestion and a second mark for the development of that point. Because discharge might be different (1) because of different weather conditions(1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
9 (a) (iii)	Award one mark for identifying one reasonable conclusion and a further mark for its extension by use of Figure 8 Comments on a difference in sections of river (1) supported by evidence/data drawn from Figure 8 (1) Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
9 (a) (iv)	Award one mark for explaining a basic reason why secondary data might be helpful and a further mark for developing that idea. An OS map would be useful to pre-plan the locations for the data collection (1) especially because you are returning months later so need to remember the locations (1)	(4) (1+1) + (1+1)

	Publications and reports (1) to discover the history of the hard engineering (1) A meteorological website to check on the autumn weather (1) which may or may not have affected the river discharge (1) Allow any other appropriate response	

Question Number		Indicative content
9 (b)		AO3 (4 marks) / AO4 (4 marks) AO3 • Assessment should clearly include primary data collected on a river • Relationship with possible enquiry question either implicit or explicit • Fitness for purpose of methods clearly related to flood risk • Attempt to weigh up relative significance of both the strengths and the weaknesses that extends beyond description • Assessment takes overarching view of quality of methods in terms of overall accuracy • Assessment should also include references to overall reliability AO4 • Strengths might include ease of a data collection in terms of safety • …….and/or accessibility • …….or legality of access • …….or range of data collected in different river environments e.g. variation between sites • ……or relatively simple to carry out with uncomplicated equipment • Weaknesses might be opposites of above but also.. • ….insufficient time to carry out data collection • Accuracy of data collection referenced • Reliability of data collection referenced
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)

Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
10 (a)	One mark for basic explanatory reason and one mark for an extension of that. Given that centres will design their own fieldwork there will be a wide range of answers. We have been studying urban geography and deprivation (1) so carrying out fieldwork to investigate variations in a town is useful (1) We tied our enquiry to theory and/or case studies (1) that allowed us to predict what we might expect from our primary data research (1) We knew that we had accessible secondary data e.g census data (1) that would allow us to compare our results with official statistics (1) Do not penalise the absence of a named fieldwork location Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
10 (b)	Award one mark for basic point and a further mark for its extension. Obviously, responses depend on their own enquiry question, but they are obliged to have carried out a quantitative environmental quality survey and a qualitative measurement of perception of quality of life so expect; We used a Environmental Quality Survey form and selected sites in the town/urban area to measure it (1) this covered several aspects of the environment e.g. traffic noise producing quantitative data (1) We conducted a questionnaire of the public asking their views of the quality of life in the town/urban area (1) and recorded these with notes of the key points as qualitative data (1) Allow any other appropriate response	(4) (1+1)+ (1+1)

Question number	Answer	Marks
10 (c)	Award one mark for basic point and a further mark(s) for its extension. Expect a clear focus on the enquiry question. Environmental quality improved as you moved away from the town centre (1) although this was not consistent (1) explanation of inconsistency (1) Environment quality was worse in more deprived areas of the town/urban area (1) although this was not consistent (1) explanation of inconsistency (1) There were variations in resident views about the quality of life (1) according to their age/gender/ethnicity (1) detail of same (1) Allow any other appropriate response	(4) (1+1) + (1+1) or 1 + (1+1+1)

Question Number	Indicative content
10 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Random selection of residents may lead to unreliable results

		• Saturday morning may not be a typical cross-section of the population but better than a weekday • Accuracy of responses might be an issue = perhaps some did not take it seriously • No information about how residency was established – many of these might be visitors • Responses inevitably subjective – for example what constitutes 'anti-social behaviour'? • May be reliability issues if sample not representative of population as a whole • However, there are obvious contrasts here that present a useful overview. AO4 • There is not much disagreement over 'crime' - the majority do not think crime is an issue. • For 'noise' the majority of older people think noise and anti-social behaviour are problems, but the younger interviewees disagreed • There was also significant disagreement over 'safety' with the older population much more worried about their safety. • The first conclusion is unclear – there were many more young people interviewed than older people • The three questions/statements do not cover the whole range of 'living environment' measures • 70 questionnaires is a decent sized sample
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork

		findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Marks
11 (a)	One mark for basic explanatory reason and one mark for an extension of that. Given that centres will design their own fieldwork there will be a wide range of answers. We have been studying rural deprivation (1) so carrying out fieldwork to investigate variations in a rural settlement is useful (1) We tied our enquiry to theory and/or case studies (1) that allowed us to predict what we might expect from our primary data research (1) We knew that we had accessible secondary data e.g census data (1) that would allow us to compare our results with 'official' statistics (1) Do not penalise the absence of a named fieldwork location Allow any other appropriate response	(2) (1+1)

Question number	Answer	Marks
11 (b)	Award one mark for basic point and a further mark for its extension. Obviously, responses depend on their own enquiry question, but they are obliged to have carried out a quantitative environmental quality survey and a qualitative measurement of perception of quality of life so expect; We used a Environmental Quality Survey form and selected sites in the rural area to measure it (1) this covered several aspects of the environment e.g. traffic noise producing quantitative data (1) We conducted a questionnaire of the public asking their views of the quality of life in the village (1) and recorded these with notes of the key points as qualitative data (1) Allow any other appropriate response	(4) (1+1)+ (1+1)

Question number	Answer	Marks
11 (c)	Award one mark for basic point and a further mark for its extension. Expect a clear focus on the enquiry question; Environmental quality improved as you moved away from the village centre (1) although this was not consistent (1) reasons for inconsistency (1) Environment quality was worse in more deprived areas of the village (1) although this was not consistent (1) reasons for inconsistency (1) (1) There were variations in resident views about the quality of life (1) according to their age/gender/ethnicity (1) detail of variations (1) Allow any other appropriate response	(4) (1+1) + (1+1) or 1 + (1+1+1)

Question Number	Indicative content
11 (d)	AO3 (4 marks) / AO4 (4 marks) AO3 • Random selection of residents may lead to unreliable results • Saturday morning may not be a typical cross-section of the population but better than a weekday • Accuracy of responses might be an issue = perhaps some did not take it seriously • No information about how residency was established – many of these might be visitors • Responses inevitably subjective – for example what constitutes 'anti-social behaviour'? • May be reliability issues if sample not representative of population as a whole • However, there are obvious contrasts here that present a useful overview. AO4 • There is not much disagreement over 'crime' - the majority do not think crime is an issue. • For 'noise' the majority of older people think noise and anti-social behaviour are problems, but the younger interviewees disagreed • There was also significant disagreement over 'safety' with the older population much more worried about their safety. • The first conclusion is unclear – there were many more young people interviewed than older people

		• The three questions/statements do not cover the whole range of 'living environment' measures • 70 questionnaires is a decent sized sample
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Level 1/Level 2 GCSE (9–1)

Friday 9 June 2023

Morning (Time: 1 hour 30 minutes)

Paper reference **1GB0/02**

Geography B

PAPER 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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P 7 2 5 7 0 A 0 1 4 0

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SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Identify which region of the UK is **only** made up of sedimentary rocks.

(1)

- ☒ **A** South-east England
- ☒ **B** North-west Scotland
- ☒ **C** North Wales
- ☒ **D** South-west England

(b) Explain **one** way in which rock is weathered.

(2)

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.....

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.....

(c) Explain **one** impact of glaciation on the UK's landscape.

(2)

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.....

(Total for Question 1 = 5 marks)

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Coastal Change and Conflict

2 (a) Explain **one** reason why rocks with many joints and faults are eroded rapidly by waves.

(2)

(b) Explain **one** benefit of using soft engineering to reduce coastal erosion.

(2)

(c) For a named UK coastal landscape, explain **two** ways in which human activity is causing change.

(4)

Named coastal landscape

1

2

(Total for Question 2 = 8 marks)

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3 (a) Study Figure 1 which is a photograph of a river landscape in western England.



Figure 1

(i) Identify which is the best evidence that this river is in flood.

(1)

- ☒ **A** There are no houses visible
- ☒ **B** Some trees are partly under water
- ☒ **C** The river is flowing very slowly
- ☒ **D** The river is very deep

(ii) State **one** piece of evidence that this river has a large sediment load.

(1)

.....

.....

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(b) Explain **one** cost and **one** benefit of using hard engineering to manage river flood risk.

(4)

cost

benefit

(Total for Question 3 = 6 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 2a and Figure 2b which have information about major flood events in England and Wales between 1920 and 2019.

Figure 2a shows the number of major flood events in each twenty-year period since 1920.

Figure 2b provides information about the five largest flood events as measured by the number of properties flooded and the number of deaths.

Number of major flood events

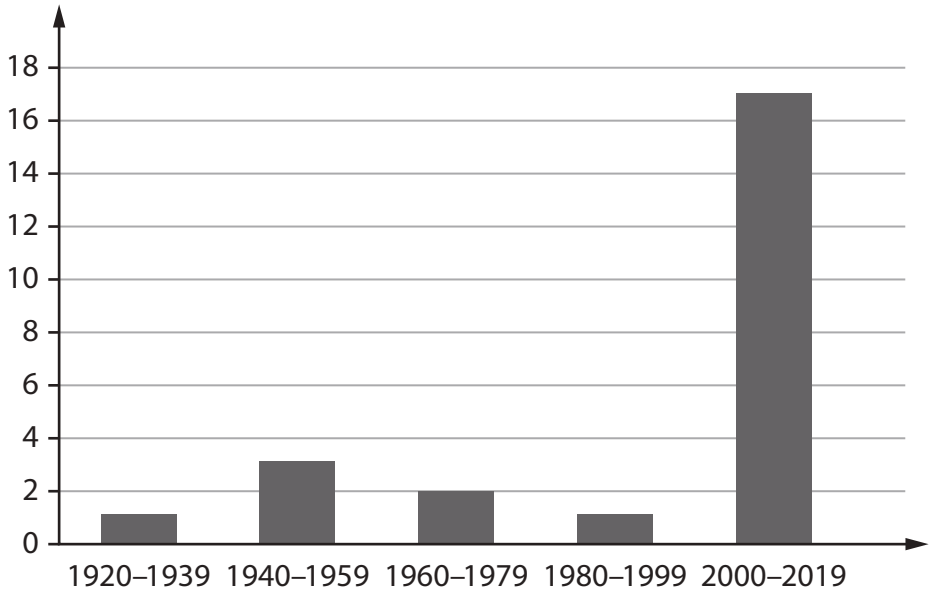


Figure 2a

Date	Cause of flooding	Location	Properties flooded	Deaths
1928	Tides, heavy rainfall and snow melt	London and Thames valley	40,000	14
1953	Tides and storm surge	East coast from Lincolnshire to Essex	24,000	307
2007	Heavy rainfall, river flooding	Midlands, Northern and South-east England	55,000	13
2013	Heavy rainfall, coastal storm surge	South-east England	11,000	0
2016	Winter storm (Desmond)	Northern England and Wales	21,000	0

Figure 2b

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Assess the physical and human reasons for the changes in flood events in the past 100 years.

You must use evidence from Figure 2a and Figure 2b in your answer.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 3 which shows the ethnic diversity of two regions of England, London and the North East.

Ethnicity	London	North East
Asian	20.7%	3.7%
Black	13.5%	1.0%
Mixed	5.7%	1.3%
White British	36.8%	90.6%
White Other	17.0%	2.4%
Other	6.3%	1.0%

Figure 3

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Compare the ethnic diversity of London with the North East.

(3)

(b) Explain **two** reasons for regional variations in ethnic diversity.

(4)

1 .....

2 .....

(Total for Question 5 = 7 marks)

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Dynamic UK cities

6 (a) Study Figure 4 which shows the percentage (%) population growth for the city of Bath and England and Wales, 2007–2020.

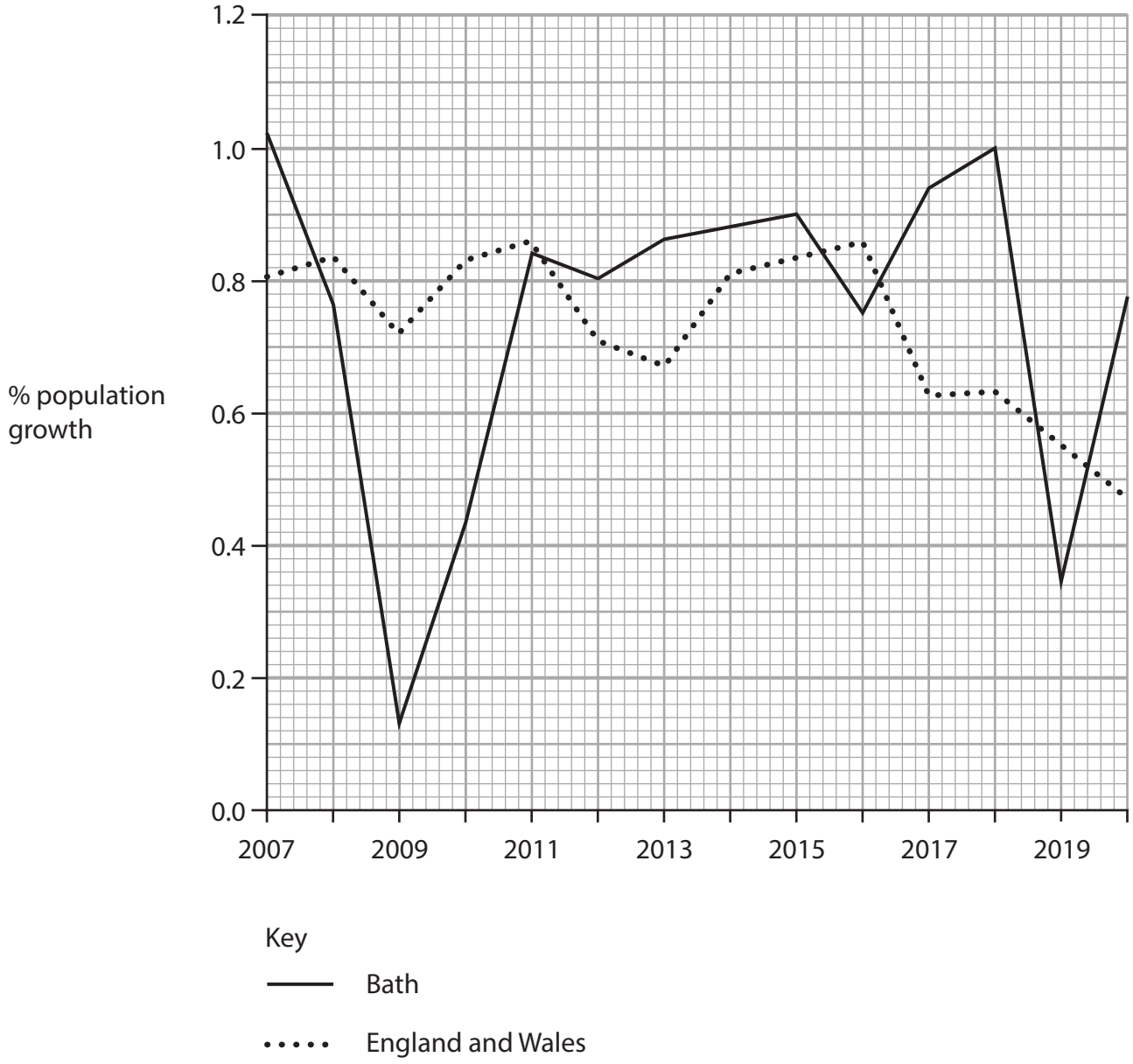


Figure 4

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(i) Identify in which year Bath's population growth was below 0.2%.

(1)

- ☒ **A** 2007
- ☒ **B** 2009
- ☒ **C** 2015
- ☒ **D** 2019

(ii) State **one** difference between Bath's population changes and those in England and Wales.

(1)

.....

.....

(b) Study Figure 5 below which shows the total number of people employed in Cardiff and the number employed in manufacturing.

Total employed	**211,000**
Employed in manufacturing	**9,000**

Figure 5

Calculate the % of Cardiff's employed population that work in manufacturing.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

..... %

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(c) For a UK city that you have studied, explain **two** strategies that have been used to make urban living more sustainable.

(4)

UK city

1 .....

2 .....

(d) For a UK city that you have studied, explain **one** reason why some parts of the city have experienced growth.

(4)

UK city

(Total for Question 6 = 12 marks)

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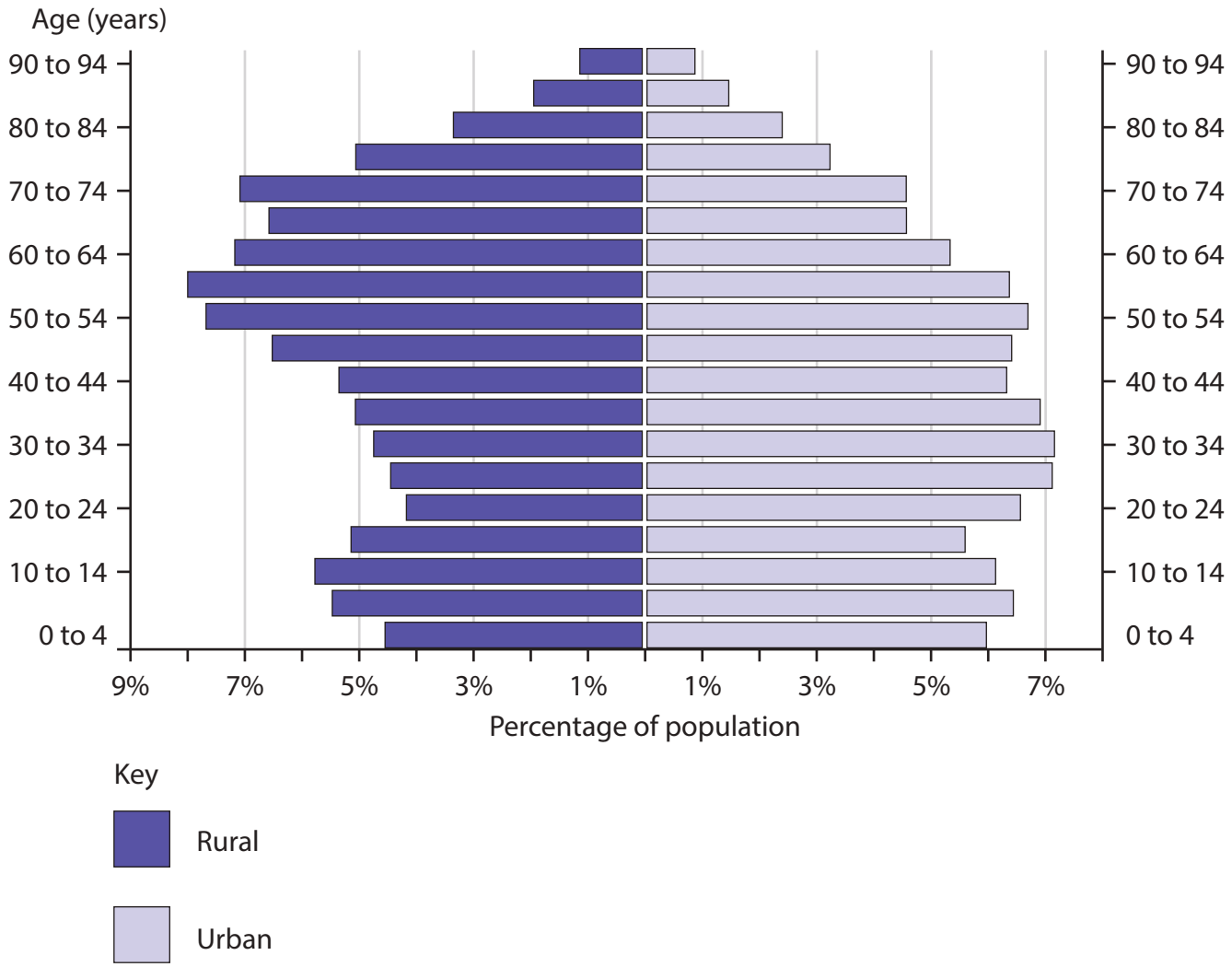
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Investigating a UK Geographical Issue

In this question, up to four additional marks will be for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 6 which includes the different age structures of the urban and rural populations of England, in 2020.



- Nearly 47 million live in urban areas and nearly 10 million live in rural areas
- The population of both urban and rural areas has risen since 2011
- Most of the rural population live within an hour's journey to a large town or city

Figure 6

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Assess the possible causes for the differences in the age structure of England's urban and rural populations.

You must use evidence from Figure 6 in your answer.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided

If you answer Question 8, put a cross in the box ☒ .

Investigating Coastal Change and Conflict

8 (a) A group of students decided to investigate beach characteristics at two different times of year at the same location, 10 minutes walk from their school.

Their first visit was in May, their second in December. The weather was calm on both days.

The beach had hard engineering with a sea-wall and several groynes. They also knew that soft engineering had taken place in previous years with beach replenishment (sand brought in from neighbouring beaches).

They measured beach gradient (slope angle) at six sites from the sea wall to the shoreline along two beach profiles, one at each end of the beach.

Their results are shown below.

	May results		**December results**	
Site	Profile 1	Profile 2	Profile 1	Profile 2
1 (sea wall)	10°	12°	14°	12°
2	6°	10°	12°	8°
3	9°	8°	10°	8°
4	5°	6°	8°	7°
5	5°	4°	7°	4°
6 (shoreline)	5°	3°	5^0	3°

Figure 7

(i) Explain **one** reason why the students selected this beach to carry out their investigation.

(2)

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(ii) Explain **one** reason why they chose to measure the beach profile at two different times of year.

(2)

(iii) Explain **one** conclusion that they may have made after analysing their results.

(2)

(iv) Explain how **two** secondary sources of data would have been useful when carrying out this investigation.

(4)

Secondary data source 1

Secondary data source 2

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(b) You have conducted your own fieldwork into how and why coastal management impacts on coastal processes.

Name your fieldwork location

Assess the strengths and weaknesses of your fieldwork methods of collecting quantitative data.

(8)

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(Total for Question 8 = 18 marks)

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Do not answer Question 9 if you have answered Question 8

If you answer Question 9, put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) A group of students decided to investigate river characteristics at two different times of year along two sections of the same river, 10 minutes walk from their school.

Their first visit was in May, their second in December. The weather was calm on both days.

The river had hard engineering in two places, with bank reinforcement. They also knew that a local landowner occasionally removed debris from the channel to maintain the water flow.

They measured river discharge in cumecs (cubic metres per second – m^3/sec^{-1}) by measuring width, average depth and velocity at six sites along two different sections of the river, separated by a kilometre with Section 2 further down the river.

Their results are shown below.

	May results		**December results**	
Site	Section 1	Section 2	Section 1	Section 2
1 (upstream)	0.05 cumecs	0.25 cumecs	0.10 cumecs	0.25 cumecs
2	0.05 cumecs	0.25 cumecs	0.15 cumecs	0.30 cumecs
3	0.07 cumecs	0.28 cumecs	0.20 cumecs	0.25 cumecs
4	0.09 cumecs	0.18 cumecs	0.25 cumecs	0.25 cumecs
5	0.12 cumecs	0.35 cumecs	0.20 cumecs	0.35 cumecs
6 (downstream)	0.10 cumecs	0.35 cumecs	0.20 cumecs	0.40 cumecs

Figure 8

(i) Explain **one** reason why the students selected this river to carry out their investigation.

(2)

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(ii) Explain **one** reason why they chose to measure river discharge at two different times of year.

(2)

(iii) Explain **one** conclusion that they may have made after analysing their results.

(2)

(iv) Explain how **two** secondary sources of data that would have been useful when carrying out this investigation.

(4)

Secondary data source 1

Secondary data source 2

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(b) You have conducted your own fieldwork into flood risk for people and property.

Name your fieldwork location

Assess the strengths and weaknesses of your fieldwork methods of collecting quantitative data.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.

Write your answer in the space provided.

If you answer Question 10, put a cross in the box ☒ .

Investigating Dynamic Urban Areas

10 You have carried out your own fieldwork investigating environmental quality in an urban area.

Name your urban fieldwork location

.....

(a) Explain **one** reason for the choice of question or hypothesis that you selected to investigate.

(2)

.....

.....

.....

.....

(b) Explain **two** ways that you used to collect data to investigate the quality of the urban environment.

(4)

1 .....

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2 .....

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(c) At the end of your geographical investigation you drew conclusions that either supported or did not support your enquiry question or hypothesis.

Explain how strongly your conclusions supported your enquiry question or hypothesis.

Your enquiry question or hypothesis.

(4)

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(d) A group of 20 students, divided into two groups of 10, carried out questionnaires in the main street of their local town centre.

They chose to do this on a Saturday morning to get a wider range of responses.

They wanted to find out what residents felt about the quality of life in the town.

One group was asked to select older residents to answer the questions; the second group was asked to select residents of their own age.

In total they had responses from 28 older people and 42 younger people.

All those interviewed were given three statements about the town.

Statement 1 – 'Crime is a major problem in the town'

Statement 2 – 'Noise and anti-social behaviour are major problems in the town'

Statement 3 – 'I don't feel safe being alone in the town in the evening'

All those interviewed were then asked to choose one of the following responses to each of these statements.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

Figure 9 on page 31 shows the results of these responses.

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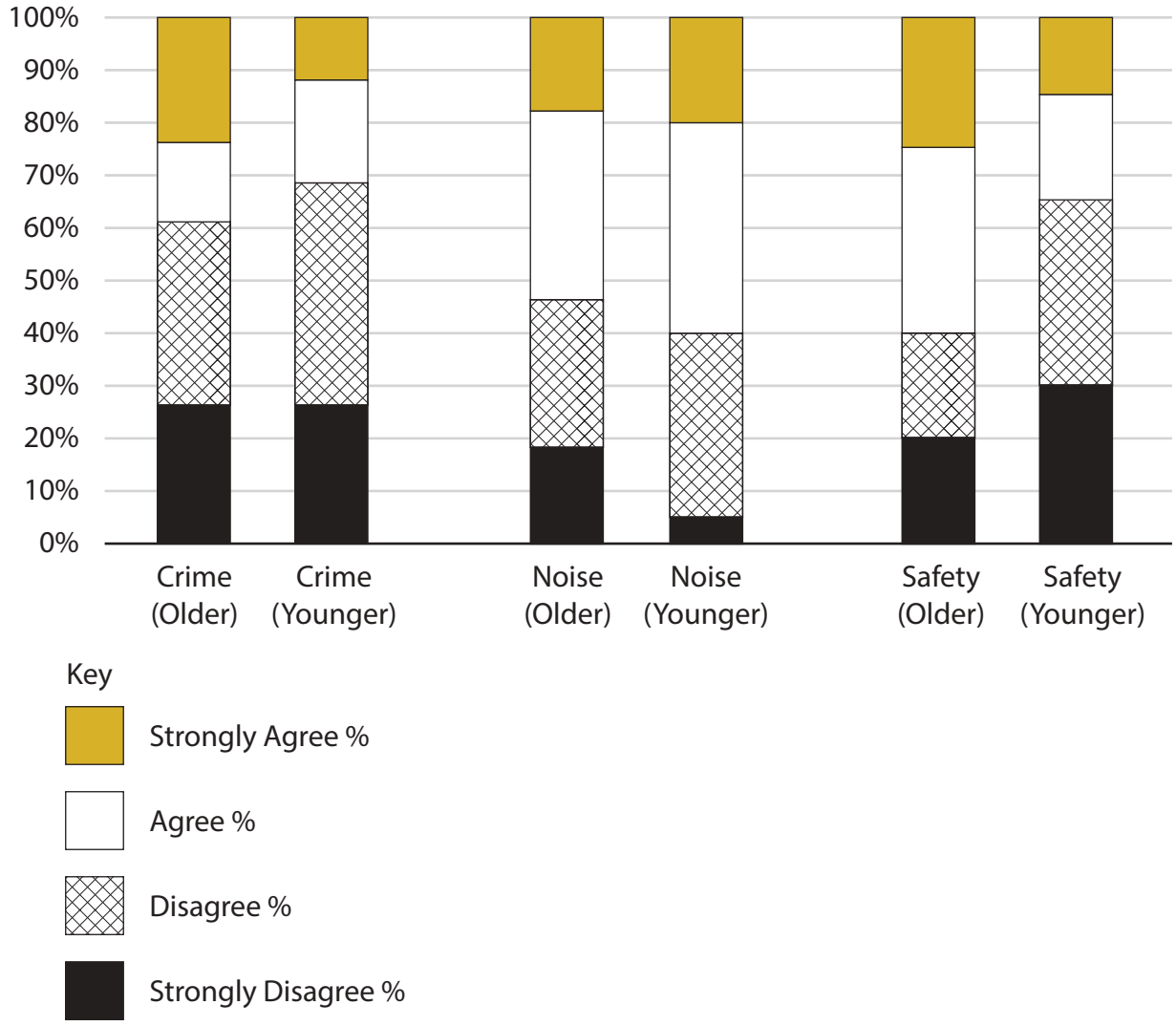


Figure 9

The students concluded that

1. the majority of people in the town were happy with their quality of life.
2. older people tended to be less happy than younger people.

Assess the reliability of these conclusions.

(8)

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(Total for Question 10 = 18 marks)

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Do not answer Question 11 if you already answered Question 10

If you answer Question 11, put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 You have carried out your own fieldwork investigating environmental quality in a rural environment.

Name your rural fieldwork location.

.....

(a) Explain **one** reason for the choice of question or hypothesis that you selected to investigate.

(2)

.....

.....

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.....

(b) Explain **two** ways that you collected data to investigate the quality of the rural environment.

(4)

1 .....

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(c) At the end of your geographical investigation you drew conclusions that either supported or did not support your enquiry question or hypothesis.

Explain how strongly your conclusions supported your enquiry question or hypothesis.

Your enquiry question or hypothesis.

(4)

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(d) A group of 20 students, divided into two groups of 10, carried out questionnaires in the main street of their local village.

They chose to do this on a Saturday morning to get a wider range of responses.

They wanted to find out what residents felt about the quality of life in the village.

One group was asked to select older residents to answer the questions; the second group was asked to select residents of their own age.

In total they had responses from 28 older people and 42 younger people.

All those interviewed were given three statements about the village.

Statement 1 – 'Crime is a major problem in the village'

Statement 2 – 'Noise and anti-social behaviour are major problems in the village'

Statement 3 – 'I don't feel safe being alone in the village in the evening'

All those interviewed were then asked to choose one of the following responses to each of these statements.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

Figure 10 on page 37 shows the results of these responses.

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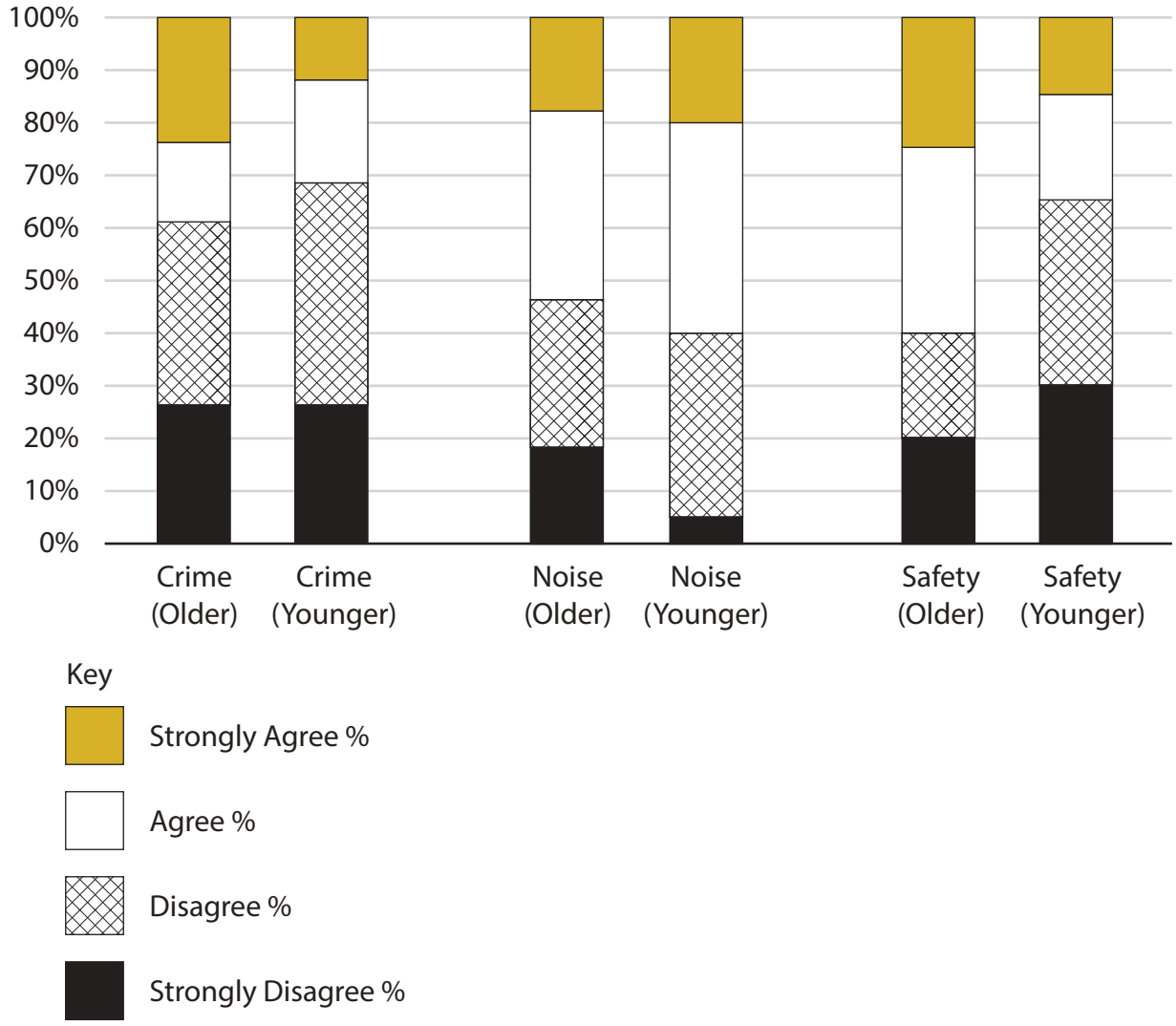


Figure 10

The students concluded that

1. the majority of people in the village were happy with their quality of life.
2. older people tended to be less happy than younger people.

Assess the reliability of these conclusions.

(8)

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all following sources used in the preparation of this paper:

Figure 1 © Stephen Dorey Creative/Alamy Stock Photo

Figure 4 adapted from https://www.plumplot.co.uk/Bath-population-changes.html

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Level 1/Level 2 GCSE (9–1)

Friday 9 June 2023

Morning (Time: 1 hour 30 minutes)

Paper reference **1GB0/02**

Geography B

PAPER 2: UK Geographical Issues

You must have:
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Sections A and B.
- In Section C1 answer **either** Question 8 **or** Question 9.
- In Section C2 answer **either** Question 10 **or** Question 11.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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Pearson

SECTION A

The UK's Evolving Physical Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 (a) Identify which region of the UK is **only** made up of sedimentary rocks.

(1)

- ☒ **A** South-east England
- ☒ **B** North-west Scotland
- ☒ **C** North Wales
- ☒ **D** South-west England

(b) Explain **one** way in which rock is weathered.

(2)

.....

.....

.....

.....

(c) Explain **one** impact of glaciation on the UK's landscape.

(2)

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.....

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(Total for Question 1 = 5 marks)

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Coastal Change and Conflict

2 (a) Explain **one** reason why rocks with many joints and faults are eroded rapidly by waves.

(2)

(b) Explain **one** benefit of using soft engineering to reduce coastal erosion.

(2)

(c) For a named UK coastal landscape, explain **two** ways in which human activity is causing change.

(4)

Named coastal landscape

1

2

(Total for Question 2 = 8 marks)

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3 (a) Study Figure 1 which is a photograph of a river landscape in western England.



Figure 1

(i) Identify which is the best evidence that this river is in flood.

(1)

- ☒ **A** There are no houses visible
- ☒ **B** Some trees are partly under water
- ☒ **C** The river is flowing very slowly
- ☒ **D** The river is very deep

(ii) State **one** piece of evidence that this river has a large sediment load.

(1)

.....

.....

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(b) Explain **one** cost and **one** benefit of using hard engineering to manage river flood risk.

(4)

cost

benefit

(Total for Question 3 = 6 marks)

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Investigating a UK Geographical Issue

4 Analyse Figure 2a and Figure 2b which have information about major flood events in England and Wales between 1920 and 2019.

Figure 2a shows the number of major flood events in each twenty-year period since 1920.

Figure 2b provides information about the five largest flood events as measured by the number of properties flooded and the number of deaths.

Number of major flood events

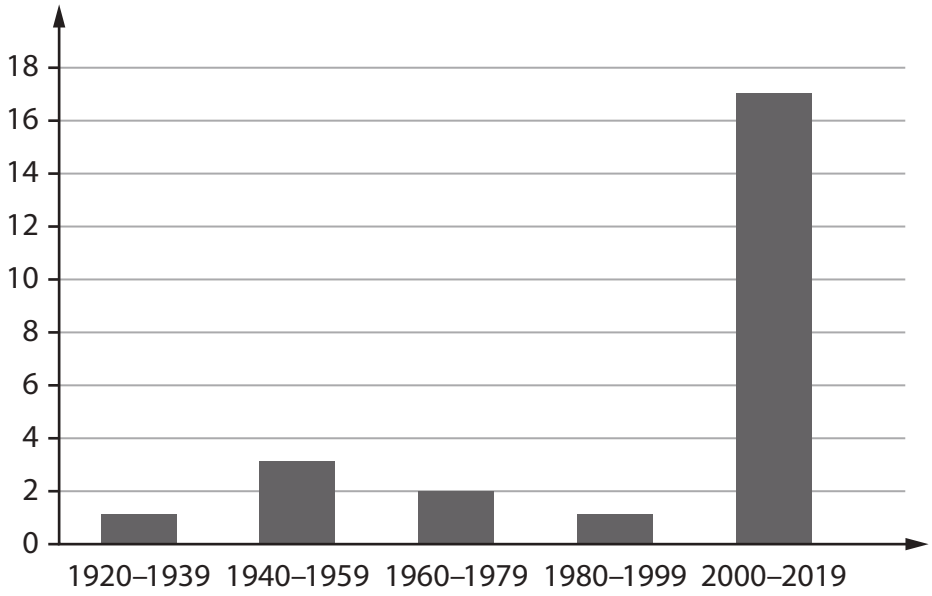


Figure 2a

Date	Cause of flooding	Location	Properties flooded	Deaths
1928	Tides, heavy rainfall and snow melt	London and Thames valley	40,000	14
1953	Tides and storm surge	East coast from Lincolnshire to Essex	24,000	307
2007	Heavy rainfall, river flooding	Midlands, Northern and South-east England	55,000	13
2013	Heavy rainfall, coastal storm surge	South-east England	11,000	0
2016	Winter storm (Desmond)	Northern England and Wales	21,000	0

Figure 2b

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Assess the physical and human reasons for the changes in flood events in the past 100 years.

You must use evidence from Figure 2a and Figure 2b in your answer.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 27 MARKS

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SECTION B

The UK's Evolving Human Landscape

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 (a) Study Figure 3 which shows the ethnic diversity of two regions of England, London and the North East.

Ethnicity	London	North East
Asian	20.7%	3.7%
Black	13.5%	1.0%
Mixed	5.7%	1.3%
White British	36.8%	90.6%
White Other	17.0%	2.4%
Other	6.3%	1.0%

Figure 3

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Compare the ethnic diversity of London with the North East.

(3)

(b) Explain **two** reasons for regional variations in ethnic diversity.

(4)

1 .....

2 .....

(Total for Question 5 = 7 marks)

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Dynamic UK cities

6 (a) Study Figure 4 which shows the percentage (%) population growth for the city of Bath and England and Wales, 2007–2020.

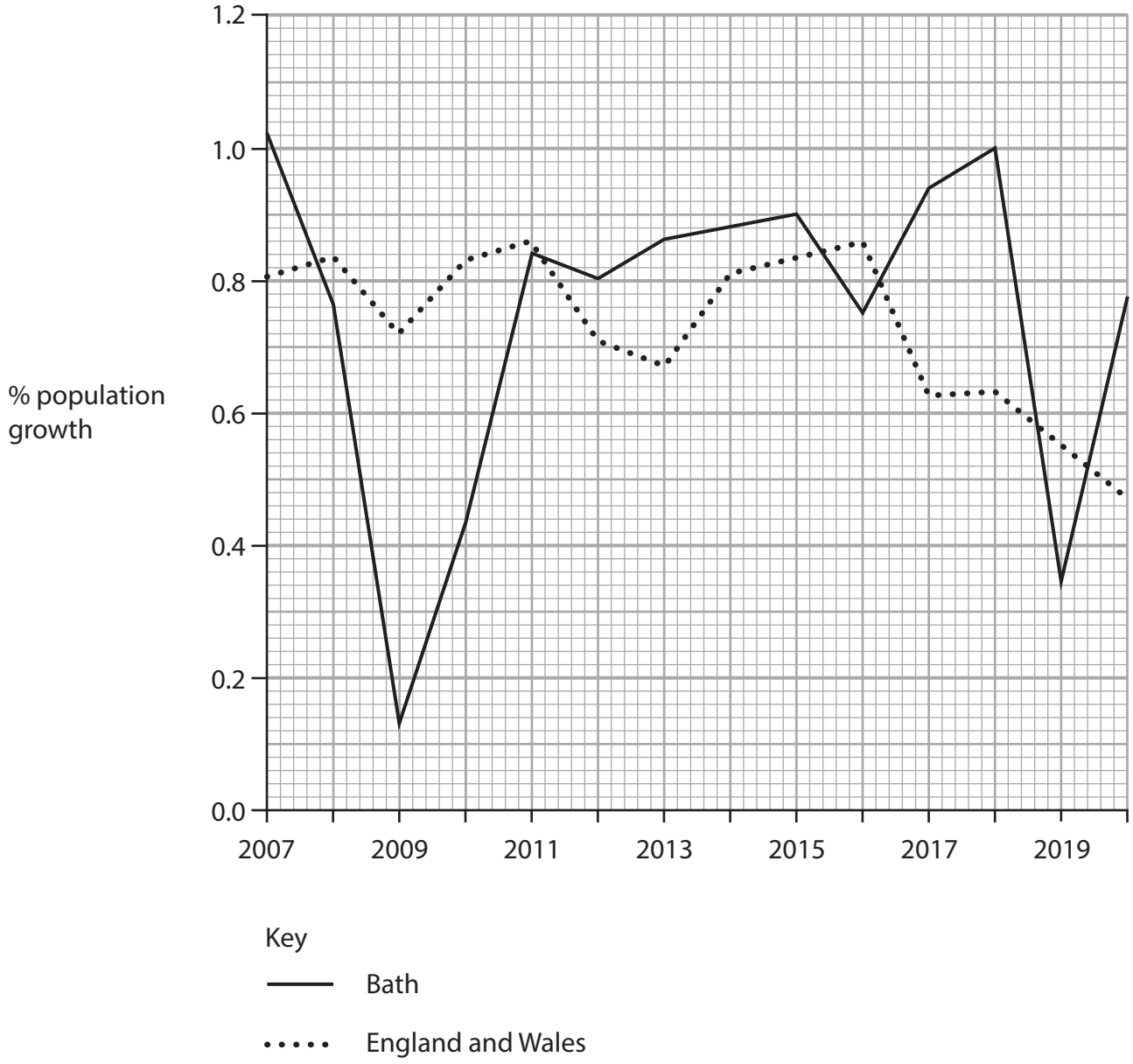


Figure 4

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(i) Identify in which year Bath's population growth was below 0.2%.

(1)

- ☒ **A** 2007
- ☒ **B** 2009
- ☒ **C** 2015
- ☒ **D** 2019

(ii) State **one** difference between Bath's population changes and those in England and Wales.

(1)

.....

.....

(b) Study Figure 5 below which shows the total number of people employed in Cardiff and the number employed in manufacturing.

Total employed	**211,000**
Employed in manufacturing	**9,000**

Figure 5

Calculate the % of Cardiff's employed population that work in manufacturing.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

..... %

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(c) For a UK city that you have studied, explain **two** strategies that have been used to make urban living more sustainable.

(4)

UK city

1 .....

2 .....

(d) For a UK city that you have studied, explain **one** reason why some parts of the city have experienced growth.

(4)

UK city

(Total for Question 6 = 12 marks)

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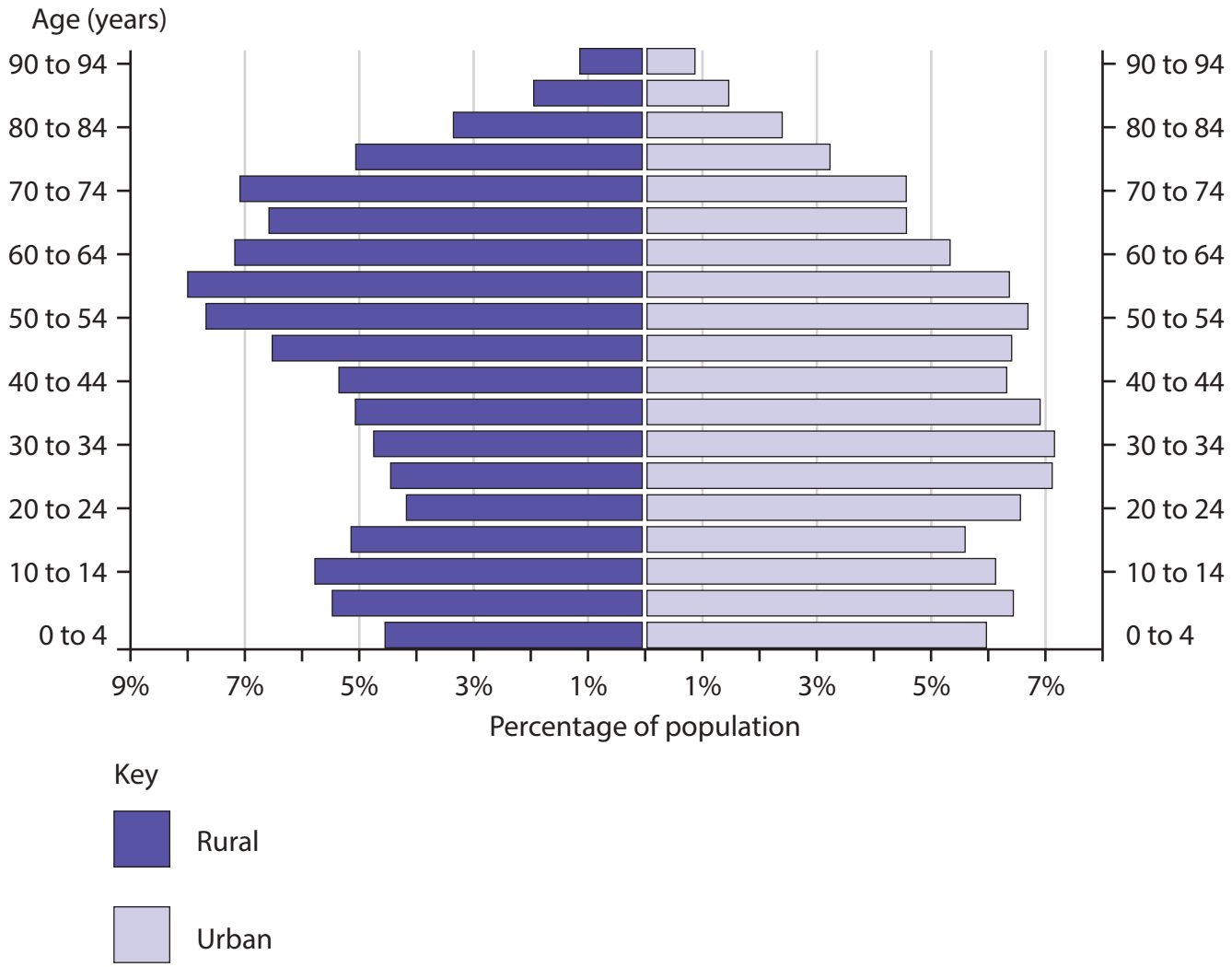
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Investigating a UK Geographical Issue

In this question, up to four additional marks will be for your spelling, punctuation and grammar and for your use of specialist terminology.

7 Analyse the information in Figure 6 which includes the different age structures of the urban and rural populations of England, in 2020.



- Nearly 47 million live in urban areas and nearly 10 million live in rural areas
- The population of both urban and rural areas has risen since 2011
- Most of the rural population live within an hour's journey to a large town or city

Figure 6

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Assess the possible causes for the differences in the age structure of England's urban and rural populations.

You must use evidence from Figure 6 in your answer.

(8)

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 12 marks)

TOTAL FOR SECTION B = 31 MARKS

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SECTION C1

Geographical Investigations: Fieldwork in a Physical Environment

Answer EITHER Question 8 OR Question 9 in this section.

Write your answers in the space provided

If you answer Question 8, put a cross in the box ☒ .

Investigating Coastal Change and Conflict

8 (a) A group of students decided to investigate beach characteristics at two different times of year at the same location, 10 minutes walk from their school.

Their first visit was in May, their second in December. The weather was calm on both days.

The beach had hard engineering with a sea-wall and several groynes. They also knew that soft engineering had taken place in previous years with beach replenishment (sand brought in from neighbouring beaches).

They measured beach gradient (slope angle) at six sites from the sea wall to the shoreline along two beach profiles, one at each end of the beach.

Their results are shown below.

	May results		**December results**	
Site	Profile 1	Profile 2	Profile 1	Profile 2
1 (sea wall)	10°	12°	14°	12°
2	6°	10°	12°	8°
3	9°	8°	10°	8°
4	5°	6°	8°	7°
5	5°	4°	7°	4°
6 (shoreline)	5°	3°	5^0	3°

Figure 7

(i) Explain **one** reason why the students selected this beach to carry out their investigation.

(2)

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(ii) Explain **one** reason why they chose to measure the beach profile at two different times of year.

(2)

(iii) Explain **one** conclusion that they may have made after analysing their results.

(2)

(iv) Explain how **two** secondary sources of data would have been useful when carrying out this investigation.

(4)

Secondary data source 1

Secondary data source 2

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(b) You have conducted your own fieldwork into how and why coastal management impacts on coastal processes.

Name your fieldwork location

Assess the strengths and weaknesses of your fieldwork methods of collecting quantitative data.

(8)

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(Total for Question 8 = 18 marks)

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Do not answer Question 9 if you have answered Question 8

If you answer Question 9, put a cross in the box ☒ .

Investigating River Processes and Pressures

9 (a) A group of students decided to investigate river characteristics at two different times of year along two sections of the same river, 10 minutes walk from their school.

Their first visit was in May, their second in December. The weather was calm on both days.

The river had hard engineering in two places, with bank reinforcement. They also knew that a local landowner occasionally removed debris from the channel to maintain the water flow.

They measured river discharge in cumecs (cubic metres per second – m^3/sec^{-1}) by measuring width, average depth and velocity at six sites along two different sections of the river, separated by a kilometre with Section 2 further down the river.

Their results are shown below.

	May results		**December results**	
Site	Section 1	Section 2	Section 1	Section 2
1 (upstream)	0.05 cumecs	0.25 cumecs	0.10 cumecs	0.25 cumecs
2	0.05 cumecs	0.25 cumecs	0.15 cumecs	0.30 cumecs
3	0.07 cumecs	0.28 cumecs	0.20 cumecs	0.25 cumecs
4	0.09 cumecs	0.18 cumecs	0.25 cumecs	0.25 cumecs
5	0.12 cumecs	0.35 cumecs	0.20 cumecs	0.35 cumecs
6 (downstream)	0.10 cumecs	0.35 cumecs	0.20 cumecs	0.40 cumecs

Figure 8

(i) Explain **one** reason why the students selected this river to carry out their investigation.

(2)

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(ii) Explain **one** reason why they chose to measure river discharge at two different times of year.

(2)

(iii) Explain **one** conclusion that they may have made after analysing their results.

(2)

(iv) Explain how **two** secondary sources of data that would have been useful when carrying out this investigation.

(4)

Secondary data source 1

Secondary data source 2

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(b) You have conducted your own fieldwork into flood risk for people and property.

Name your fieldwork location

Assess the strengths and weaknesses of your fieldwork methods of collecting quantitative data.

(8)

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(Total for Question 9 = 18 marks)

TOTAL FOR SECTION C1 = 18 MARKS

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SECTION C2

Geographical Investigations: Fieldwork in a Human Environment

Answer EITHER Question 10 or Question 11 in this section.

Write your answer in the space provided.

If you answer Question 10, put a cross in the box ☒ .

Investigating Dynamic Urban Areas

10 You have carried out your own fieldwork investigating environmental quality in an urban area.

Name your urban fieldwork location

.....

(a) Explain **one** reason for the choice of question or hypothesis that you selected to investigate.

(2)

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(b) Explain **two** ways that you used to collect data to investigate the quality of the urban environment.

(4)

1 .....

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(c) At the end of your geographical investigation you drew conclusions that either supported or did not support your enquiry question or hypothesis.

Explain how strongly your conclusions supported your enquiry question or hypothesis.

Your enquiry question or hypothesis.

(4)

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(d) A group of 20 students, divided into two groups of 10, carried out questionnaires in the main street of their local town centre.

They chose to do this on a Saturday morning to get a wider range of responses.

They wanted to find out what residents felt about the quality of life in the town.

One group was asked to select older residents to answer the questions; the second group was asked to select residents of their own age.

In total they had responses from 28 older people and 42 younger people.

All those interviewed were given three statements about the town.

Statement 1 – 'Crime is a major problem in the town'

Statement 2 – 'Noise and anti-social behaviour are major problems in the town'

Statement 3 – 'I don't feel safe being alone in the town in the evening'

All those interviewed were then asked to choose one of the following responses to each of these statements.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

Figure 9 on page 31 shows the results of these responses.

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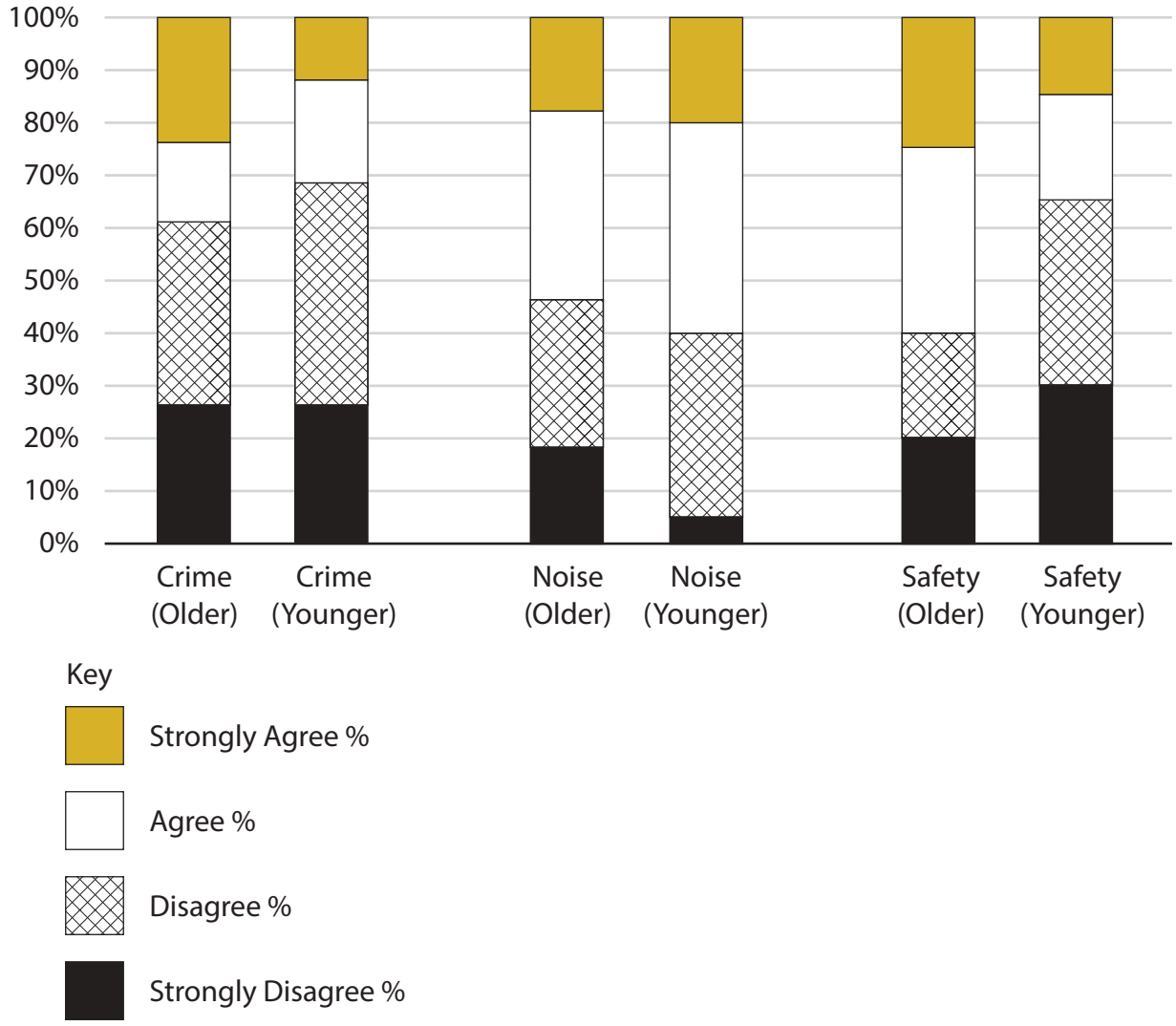


Figure 9

The students concluded that

1. the majority of people in the town were happy with their quality of life.
2. older people tended to be less happy than younger people.

Assess the reliability of these conclusions.

(8)

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(Total for Question 10 = 18 marks)

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Do not answer Question 11 if you already answered Question 10

If you answer Question 11, put a cross in the box ☒ .

Investigating Changing Rural Settlements

11 You have carried out your own fieldwork investigating environmental quality in a rural environment.

Name your rural fieldwork location.

.....

(a) Explain **one** reason for the choice of question or hypothesis that you selected to investigate.

(2)

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(b) Explain **two** ways that you collected data to investigate the quality of the rural environment.

(4)

1 .....

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(c) At the end of your geographical investigation you drew conclusions that either supported or did not support your enquiry question or hypothesis.

Explain how strongly your conclusions supported your enquiry question or hypothesis.

Your enquiry question or hypothesis.

(4)

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(d) A group of 20 students, divided into two groups of 10, carried out questionnaires in the main street of their local village.

They chose to do this on a Saturday morning to get a wider range of responses.

They wanted to find out what residents felt about the quality of life in the village.

One group was asked to select older residents to answer the questions; the second group was asked to select residents of their own age.

In total they had responses from 28 older people and 42 younger people.

All those interviewed were given three statements about the village.

Statement 1 – 'Crime is a major problem in the village'

Statement 2 – 'Noise and anti-social behaviour are major problems in the village'

Statement 3 – 'I don't feel safe being alone in the village in the evening'

All those interviewed were then asked to choose one of the following responses to each of these statements.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

Figure 10 on page 37 shows the results of these responses.

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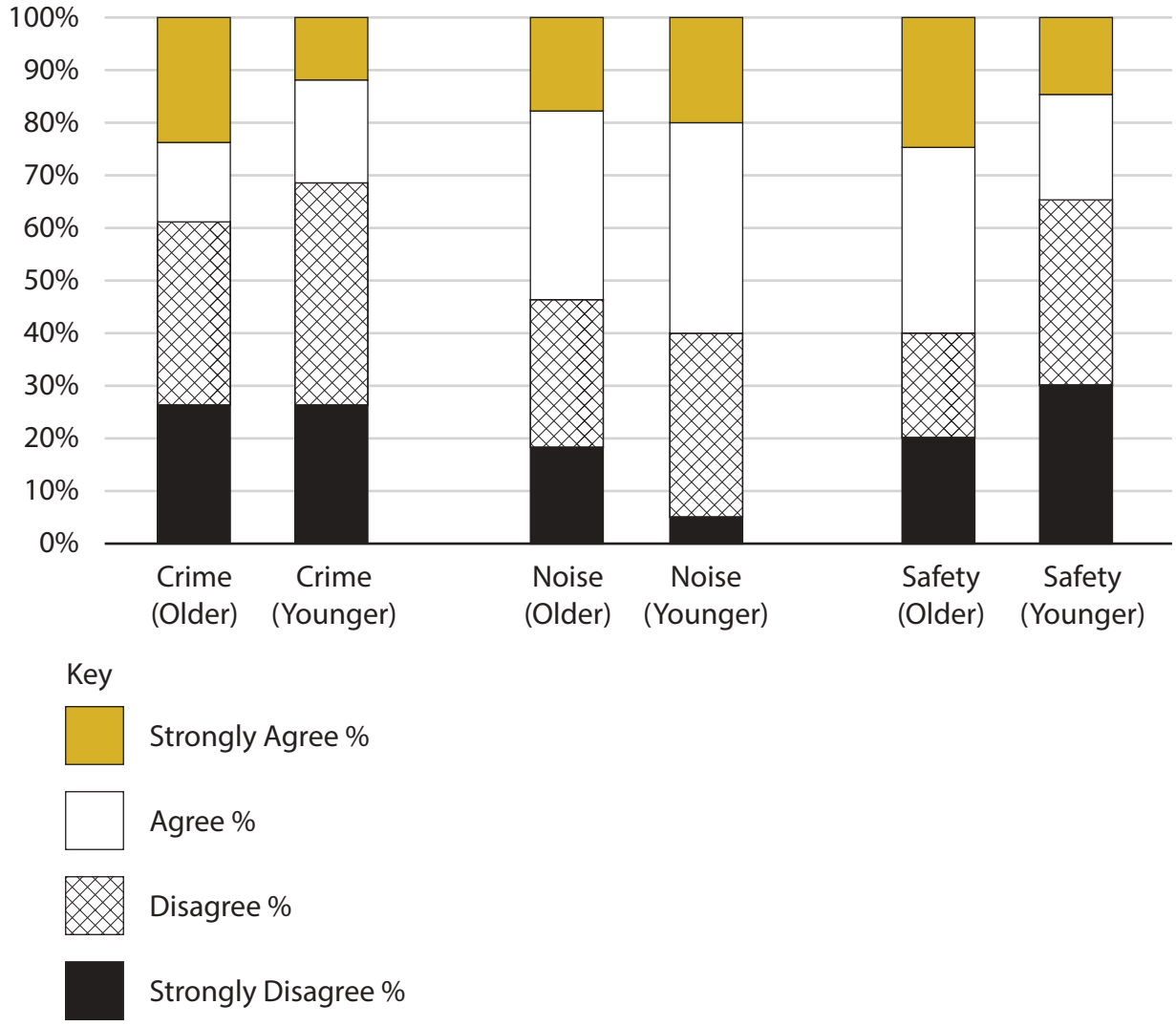


Figure 10

The students concluded that

1. the majority of people in the village were happy with their quality of life.
2. older people tended to be less happy than younger people.

Assess the reliability of these conclusions.

(8)

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(Total for Question 11 = 18 marks)

TOTAL FOR SECTION C2 = 18 MARKS
TOTAL FOR PAPER = 94 MARKS

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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all following sources used in the preparation of this paper:

Figure 1 © Stephen Dorey Creative/Alamy Stock Photo

Figure 4 adapted from https://www.plumplot.co.uk/Bath-population-changes.html



Mark Scheme (Results)

Summer 2018

Pearson Edexcel GCSE

In Geography B (1GB0/03)

Paper 03: People and Environment Issues – Making Georaphical Decisions

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Summer 2018
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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question number	Answer	Mark
1a	The number of species / how many species there are OR The diversity/variety/types/kinds /number of life/organisms/animals & plants (must have both) Accept any other appropriate response.	1

Question number	Answer	Mark
1bi	India	1

Question number	Answer	Mark
1bii	A (1950-1970) [it grew from 70m to 120m and 120-70 = 50m] *B incorrect because it grew from120m to 180m = 60m* *C incorrect because it grew from180m to 240m = 60m* *D incorrect because it grew from 240m to 293m = 53m*	1

Question number	Answer	Mark
1ci	2015	1

Question number	Answer	Mark
1cii	Award 1 mark for a general point about a population's greater wealth / purchasing power /development leading to increased water use / demand; and a further 1 mark for some expansion (related to either why demand is rising, or what the demand is for), up to a maximum of 2 marks. • More people have higher incomes so use more water (1) for example running home appliances / paying water bills / accessing clean water / buying bottled water / dishwashers (1) • As the national economy has developed (1) there are more businesses using water (1) Accept any other appropriate response.	(2)

Question number	Answer	Mark
1d	Award 1 mark for a basic point and a further mark for explanation up to a maximum of 2 marks. New technologies (may give example) means that resources will not run out (1), and these have been developed *because current resource limits / population pressure is recognised* (1) When population grows new resources are created / discovered (1) *because of a larger pool of innovative people /scientists* (1) Accept any other appropriate response.	(2)

Question number	Answer	Mark
2a	Award 1 mark for any identified change in the pattern up to a maximum of 3 marks. • Less forest overall (1) • Less forest in Asia (may give details) (1) • Less forest in Africa (may give details) (1) • Less forest in Americas (may give details) (1) • Less on/near Tropic of Cancer (may give details) (1) • Less on/near Tropic Capricorn (may give details) (1) • Very little change / some loss at /on equator (1) • Changes in named countries (credit each country) (1) Accept any other appropriate response.	(3)

Question number	Answer	Mark
2bi	C US$800 million [because they have recived 200m of a possible 1000m abnd 1000-200 = 800m] *A incorrect because the only correct answer is 200m* *B incorrect because the only correct answer is 200m* *D incorrect because the only correct answer is 200m*	1

Question number	Answer	Mark
2bii	In each case, award 1 mark for a basic explanation of a specific global action, and 1 mark for further expansion, up to a maximum of 2 marks. • CITES / Convention on International Trade in Endangered Species of Wild Fauna and Flora stops animal trade (1) which helps protect endangered species (1) • REDD / Reducing Emissions from Deforestation and Forest Degradation provides funding / payments (1) which results in forest being set aside / protected (1) Other possibilities may include RAMSAR (mangrove), some UNESCO sites, G7/20/other global governance actions Suggestions explanation of how forest can be saved (global scale is implied only) may gain 1 mark each up to a maximum of 2 marks e.g. more national parks / protected areas / afforestation / planting schemes. Accept any other appropriate response.	2 + 2 (4)

Question number	Answer	Mark
3ai	Award 1 mark for working for an appropriate way of calculating and award a further 1 mark for correct answer up to maximum 2 marks. Possible workings: • 868 ÷ 100 x 15 • 868 x 0.15 • (868 ÷ 10) + (868 ÷ 10)/2 Correct answer (must have one decimal place only): 130.2 Maximum of one mark if no working out is shown.	1 1 (2)

Question number	Answer	Mark
3aii	Award 1 mark for identifying relevant evidence and 1 mark for an explanation of the link with a nation's economic or development status Around one quarter / the largest part / 26% of GDP is generated by manufacturing sector (1) showing that the country is industrialising / no longer developing country (1) 7% of GDP comes from financial services (1) showing that the economy is starting to mature (1) Agriculture / mining still significant / important / clearly present showing it is not yet a developed country Significant Utilities/ construction (1) so still in development (1) Hotels and restaurants are significant / important / 13% suggesting it is not a developing country Accept any other appropriate response.	(2)

Question number	Answer	Mark
3b	In each case, award 1 mark for the basic reason identified and further marks for explanation, up to a maximum of 2 marks. More space needed (1) to manufacture these palm oil products (so rainforest cleared) (1) Indonesia's climate is suited to both palm oil and rainforest (1) leading to widespread burning/clearance by companies (1) Very profitable activity (1) for companies who grow / process the palm oil products (1) Weak environmental laws (1) make it relatively easy for palm oil companies to clear the rainforest (1) Accept any other appropriate response.	2 + 2 (4)

Question number	Answer	Mark
3c	Award 1 mark for a basic reason and one mark for expansion, up to a maximum of 2 marks. A higher oil price means consumers switch / turn to palm oil (1) which means biofuel / palm oil prices likely to rise (1) Both prices could rise together if total global demand changes (1) e.g. recovery after 2008-09 financial crisis or other events (1) Accept any other appropriate response.	(2)

Question number	Answer	Mark
3d	For each reason, award 1 mark for a basic reason and one mark for expansion, up to a maximum of 2 marks. Prices in Figure suggests falls could be triggered by peaks (1) showing commodity prices can rise / fall in cycles (1) Consumers may seek out / be attracted to alternative energy sources (1) so oil producers lower prices to lure them back (1) Prices fall in 2012 might be because supply increased (1) for instance due to political decisions by oil producers to increase output (1) Prices fall in 2008 might be because demand fell (1) which may be linked to world events / happened in the global financial crisis (1) Accept any other appropriate response. For the award of full marks, answer must include some analysis of the information provided.	2 + 2 (4)

Question number	Indicative content
3e	AO3 (4 marks)/AO4 (4 marks) Answers should focus on the environmental impacts caused by different energy resources and in so doing may make an assessment of their severity, long-term impacts, etc. A03 • Overview of impacts: there are a range of impacts but overall they are all negative. • Assessment of (relative) severity / importance of impacts: e.g. forest fires could be seen as most damaging because environment / society gg/ economy all harmed • Irreversible impacts: which makes them especially serious e.g. biodiversity losses (orangutans), forest cannot regrow (because soil has gone too). • Reversible impacts: may assess the degree to which some negative impacts could be tackled /reversed e.g. afforestation • Linked impacts: pollution in some places affects other places too due to air and water currents; river pollution may have knock on effects for coastal and marine ecosystems; linked impacts and connections: some environmental impacts are serious because of their implications for health/people/economy • Contrasting impacts: different parts of Indonesia suffer from different types of energy resource development including onshore and offshore pollution; some impacts affect the landscape, others affect water supply, air pollution and consequentially impacts on ecosystems and biodiversity. A04 • The orangutans are critically threatened and may not be brought back from the brink in Sumatra (Figure 9) • Only 7,500 Sumatran orangutans remain (Figure 9) • Smoke pollution from Sumatra has affected not just other parts of Indonesia but other countries too e.g. Singapore (Figure 9 and Figure 6) • Half of rivers in Kalimantan are at risk from water pollution from coal mining though we do not know how badly they are affected (Figure 9) • Widespread coal mine landscape scarring (Figure 9) • Soil have been eroded (Figure 9) which makes it hard to restore biodiversity

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Indicative content
3f (i)	Award 1 mark for a basic reason and one mark for expansion (containing either explicit or implied link with carbon reduction), up to a maximum of 2 marks. Higher income countries may invest more in renewable energy / solar power / wind turbines / nuclear (1) and avoid fossil fuels (1) Educated consumers are aware of issues and buy locally (1) and reduce food miles (1) Accept any other appropriate response.

	Indicative content
3f (ii)	AO3 (4 marks)/AO4 (4 marks) Answers should focus on why different groups have different views on who is most to blame for deforestation. A03 • One reason - perhaps the most important - is that deforestation is a complex problem, as the booklet shows, so it is hard to identify a single culprit. • Another reason is there are private, public, local and global forces at play, so no-one in particular can be singled out. • Perspectives differ on who to blame due to partial knowledge of the bigger issues e.g. indigenous people may blame local companies not the firms they supply (and who they know less about). • Indigenous people may not view their own small-scale burning of forest as blameworthy because they do not appreciate the scale of the problem they contribute to. • Each group can blame the next 'linked' group e.g. companies can say the blame lies 'upstream' with the consumers who drive demand. • People who see the 'big picture' might say the government of Indonesia is really to blame for not passing and upholding stricter laws to protect the environment. A04 • Pressure groups say consumers everywhere are to blame because they are putting pressure on companies to stop burning forest. (Figure 10) • Norway's government blames Indonesia's government because it has seen how much more was done in Brazil. (Figure 10) • Forest experts blame companies for not reusing land sustainably and clearing more forest instead. (Figure 10) • Some palm oil companies want to help the environment. They blame the government for working with companies that care less. (Figure 10) • Local villagers blame the companies who have ruined their efforts to develop ecotourism. (Figure 10) • Government officials think that villagers want to develop economically. (Figure 10)

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

	Indicative content
4	AO2 (4 marks)/AO3 (4 marks)/AO4 (4 marks) In order to fully justify a choice, the candidate must consider all three alternative options and establish a clear argument about the meaning of 'best for people *and* the environment'. There is no prefered option. All options can be justified. The balance of the case will vary according to the option chosen. • Option 1 can be justified by suggesting that this is the best compromise. Companies can reuse land if they want to but they are not currently forced to do so. This would stop further forest and biodiversity loss and also stop people being harmed by smoke from fires. • Option 2 can be justified by suggesting that the environment is already so degraded, and orangutans endangered, that the best option must involve some restoration. This could be best for people too if ecotourism can be developed. • Option 3 can be justified by suggesting that economic development must be the priority for poorer people in Indonesia. It may be possible to find fixes for environmental problems such as reafforestation and breeding programmes for orangutans. A02 • Tropical rainforest are important global carbon sinks and should be protected • Tropical rainforests have high biodiversity which should be protected • Palm oil is needed by industries that might otherwise use fossil fuel • Burning forest creates smoke pollution which is harmful to people's health • Palm oil companies create employment and wealth for local people • Rural villages in Indonesia need to develop economically A03 • The 'best' option should meet both environmental and socio-economic goals equally, or in a relatively balanced way. • The 'best' option is one which takes the long view and thinks about more than short-term economic growth. • It is important to think globally as well as locally when deciding what is best for people and the environment. • Some people might view the developmental needs of communities as being of greater importance than orangutans • Some people might view climate change as the most important issue affecting both people and the environment today and in the future. • The population-resource relationship is complicated, and stronger government and new technologies must be part of the equation. A04 • Some communities in Sumatra and Kalimantan still need to use wood as their main fuel source because they lack alternatives (introduction). • Indonesia's population is growing larger and wealthier (Figures 1 and 2). • Stopping forest loss would unlock one billion dollars of Norwegian money (Figure 4). • Forestry is less than 15% of the economy and now less important than manufacturing and services (Figure 5). • There are only 7.500 Sumatran Orangutans left (Critically Endangered). • Air pollution killed in 1997 and workers are exposed to pesticides (Figure 9).

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-4	• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)
Level 2	5-8	• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9-12	• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance:* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

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Write your name here

Surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Geography B

Paper 3: People and Environment Issues – Making Geographical Decisions

Monday 11 June 2018 – Afternoon
Time: 1 hour 30 minutes

Paper Reference
1GB0/03

You must have:
Resource Booklet (enclosed)
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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P 5 2 3 7 1 A 0 1 1 6

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SECTION A

People and the Biosphere

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Use Section A (pages 2, 3 and 4) in the Resource Booklet to answer this question.

(a) Define the term **biodiversity**.

(1)

.....

.....

(b) Study Figure 1.

(i) Identify Country X.

(1)

.....

(ii) Identify the period when Indonesia's population increased by 50 million exactly.

(1)

☒ **A** 1950–1970

☒ **B** 1970–1990

☒ **C** 1990–2010

☒ **D** 2010–2030

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(c) Study Figure 2.

(i) Identify in which of the years shown, the majority of Indonesia's population were earning at least US$10 per day.

(1)

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(ii) Explain **one** way in which rising affluence could increase the demand for water in Indonesia.

(2)

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(d) Boserup believed a growing population would never run out of resources.

Explain **one** reason why a growing population might never run out of resources.

(2)

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(Total for Question 1 = 8 marks)

TOTAL FOR SECTION A = 8 MARKS

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SECTION B

Forests Under Threat

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

2 Use Section B (pages 5 and 6) in the Resource Booklet to answer this question.

(a) Study Figure 3.

Identify **three** changes in the pattern shown.

(3)

1 .....

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2 .....

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3 .....

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(b) Study Figure 4.

(i) Identify how much more money Indonesia's government could be given if it protected the rainforest more successfully.

(1)

☒ **A** 1000 million US$

☒ **B** 930 million US$

☒ **C** 800 million US$

☒ **D** 70 million US$

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(ii) Explain **two** global actions which help protect the rainforest.

(4)

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(Total for Question 2 = 8 marks)

TOTAL FOR SECTION B = 8 MARKS

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SECTION C

Consuming Energy Resources

Answer ALL questions. Write your answers in the spaces provided.

3 Use Section C (pages 7, 8, 9, 10, 11 and 12) in the Resource Booklet to answer this question.

(a) Study Figure 5.

(i) Calculate the value in dollars of agriculture (including oil palm).

Answer to one decimal place. Show your working.

(2)

..... billion US$

(ii) Explain **one** piece of evidence from Figure 5 which shows that Indonesia is an emerging country.

(2)

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(b) Study Figure 6, Figure 7a and Figure 7b.

Explain **two** reasons why rising global demand for the products shown in Figure 7a has led to widespread rainforest loss in Indonesia.

(4)

1 .....

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2 .....

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(c) Study Figure 8a and Figure 8b.

Suggest **one** reason why fossil fuel oil and palm oil prices often rise together.

(2)

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(d) Study Figure 8a.

Explain **two** reasons for **lower** fossil fuel oil prices in some years.

(4)

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2 .....

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(e) Study Figure 9.

Assess the environmental impacts of exploiting Indonesia's energy resources.

(8)

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(f) (i) Explain **one** reason why the rising affluence of a country can lead to a reduction in its carbon footprint.

(2)

(ii) Study Figure 10.

Assess the reasons why people disagree over who is to blame for deforestation.

(8)

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(Total for Question 3 = 32 marks)

TOTAL FOR SECTION C = 32 MARKS

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SECTION D

Making a Geographical Decision

Answer ALL questions. Write your answers in the spaces provided.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

4 Study the **three** options below that the Indonesian Government can choose from in order to manage the palm oil industry.

Option 1: Prevent any further deforestation but allow oil palms to be grown on land where forest has already been removed.

Option 2: Stop palm oil production completely and assist the regrowth of the rainforest and the restoration of its wildlife.

Option 3: Encourage further production of palm oil in order to increase Indonesia's exports and help economic development.

Select which option the Indonesian Government should choose that would be best for its people and its environment.

Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(12)

Chosen option .....

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 4 = 16 marks)

TOTAL FOR SECTION D = 16 MARKS
TOTAL FOR PAPER = 64 MARKS

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Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Geography B

Paper 3: People and Environment Issues – Making Geographical Decisions

Monday 11 June 2018 – Afternoon
Resource Booklet

Paper Reference
1GB0/03

Do not return this Resource Booklet with the question paper.

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SECTION A

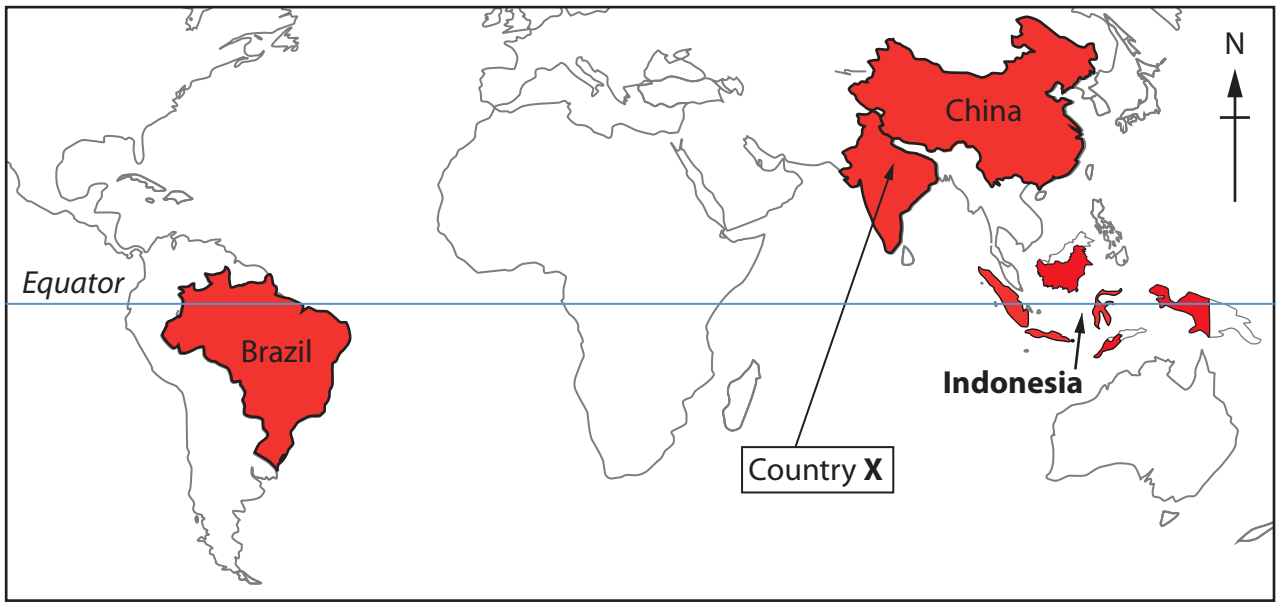
People and the biosphere

The issue: Conflicts over energy and the environment in Indonesia.

- Indonesia is the world's fourth most populated country and an emerging country, although levels of development vary greatly across its 1700 islands.
- Population growth, industrialisation and rising affluence (wealth) mean Indonesia's own energy needs are growing.
- This tropical country is the world's largest producer of palm oil, which is a biofuel. It is also a major exporter of coal and has offshore fossil fuel oil reserves.
- Mining coal and the planting of oil palms lead to the loss of tropical rainforest and reduces their rich and unique biodiversity.

Introduction

- Tropical rainforests grow in regions with high, all-year rainfall and high temperatures, including much of Indonesia. Oil palms need these conditions too.
- As a result, widespread deforestation has taken place in Indonesia to make room for oil palm trees. This is commonly done by burning down the rainforest.
- The Indonesian government encourages the palm oil industry and the mining companies to help economic development. The government has passed a number of environmental protection laws, however these are not always enforced.
- Indonesia has many remote islands making it hard to monitor palm oil companies.
- Some poor rural communities in Sumatra, Kalimantan and other forested Indonesian islands have always used wood from the rainforest as their main fuel source. Until they have an alternative energy source, deforestation will continue even if the palm oil companies can be controlled.



Year:	1950	1970	1990	2010	2030 (projected)
Population (millions)					
China	540	814	1165	1359	1453
Country **X**	376	555	868	1205	1476
Indonesia	70	120	180	240	293
Brazil	52	110	152	198	229

Figure 1

Population data and locations for Indonesia and other large emerging countries, 1950-2030

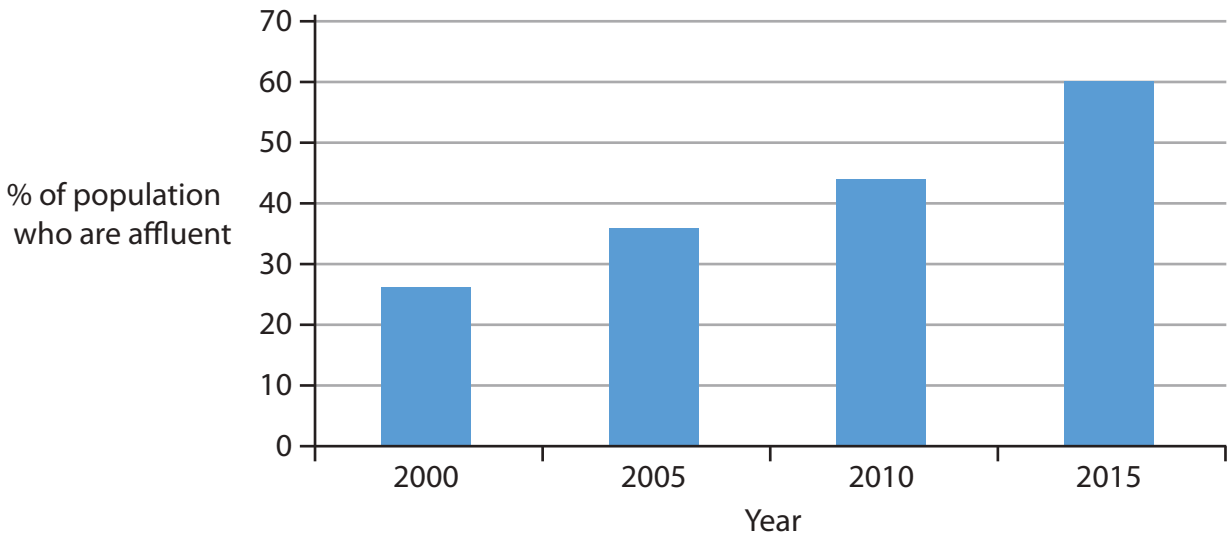


Figure 2

An estimate of rising affluence (personal income of at least US$10 per day) in Indonesia, 2000-2015

SECTION B

Forests under threat

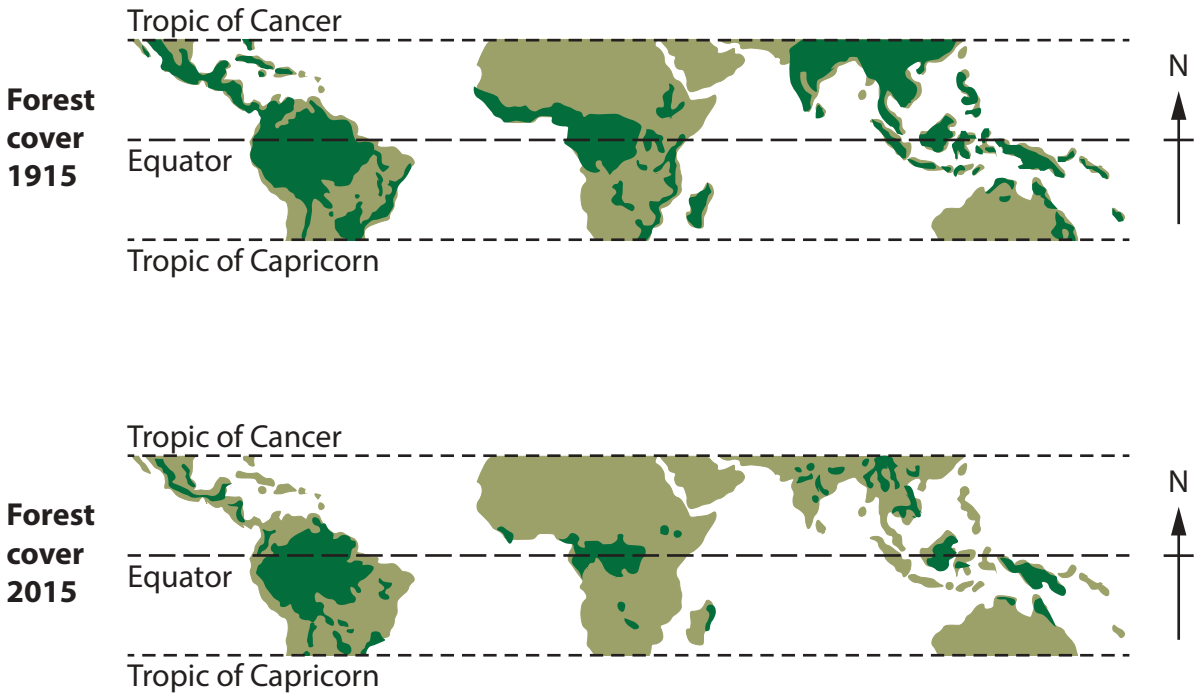


Figure 3

The distribution of forest between the Tropics in 1915 and 2015

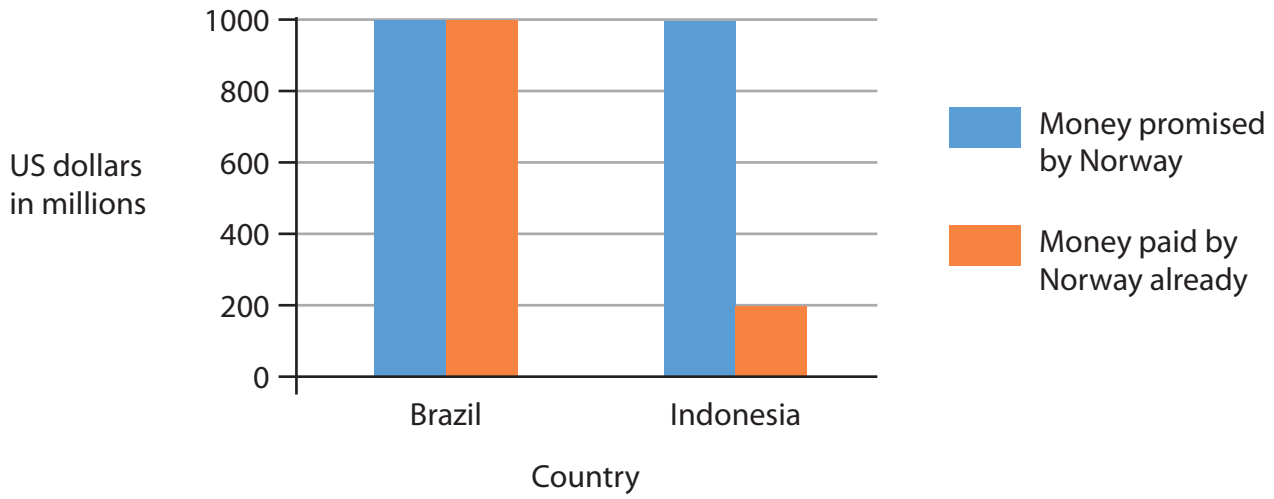
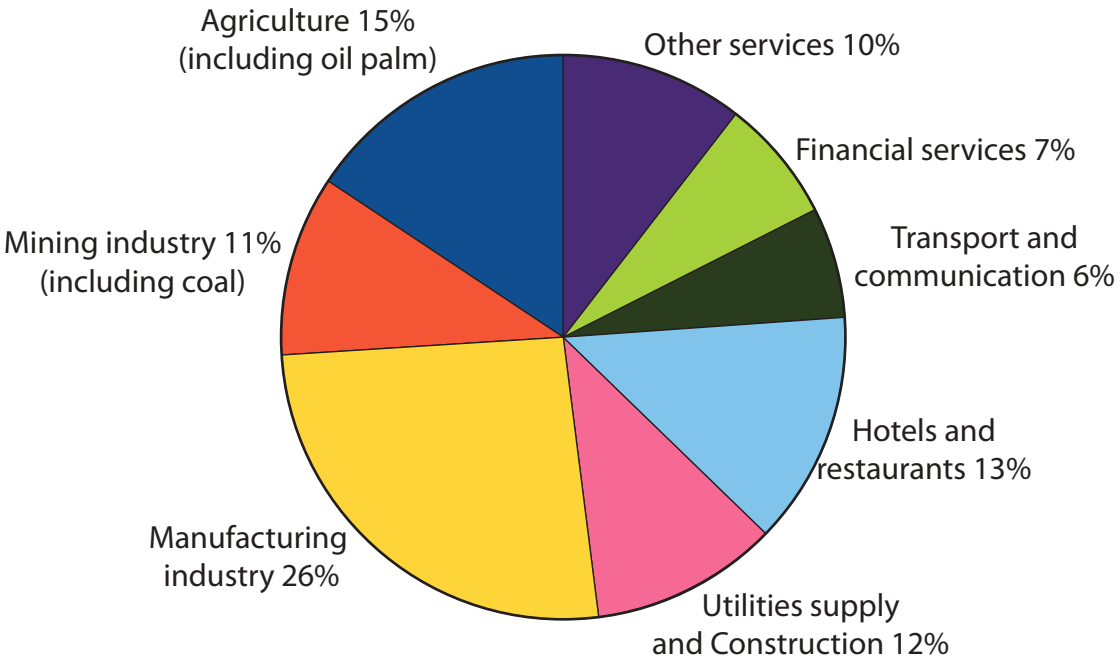


Figure 4

Money promised and paid for rainforest conservation by Norway's Government to Indonesia and Brazil (million US$)

SECTION C

Consuming energy resources



Indonesia's total GDP: 868 billion US$

Figure 5

The structure of Indonesia's GDP, 2014

An area of Indonesia's original rainforest cover.



Both local communities and companies burn rainforest to clear the land.



The land cleared by companies is now used to grow oil palm trees.



Figure 6

Rainforest in Indonesia is being cleared to make more room for oil palm plantations.

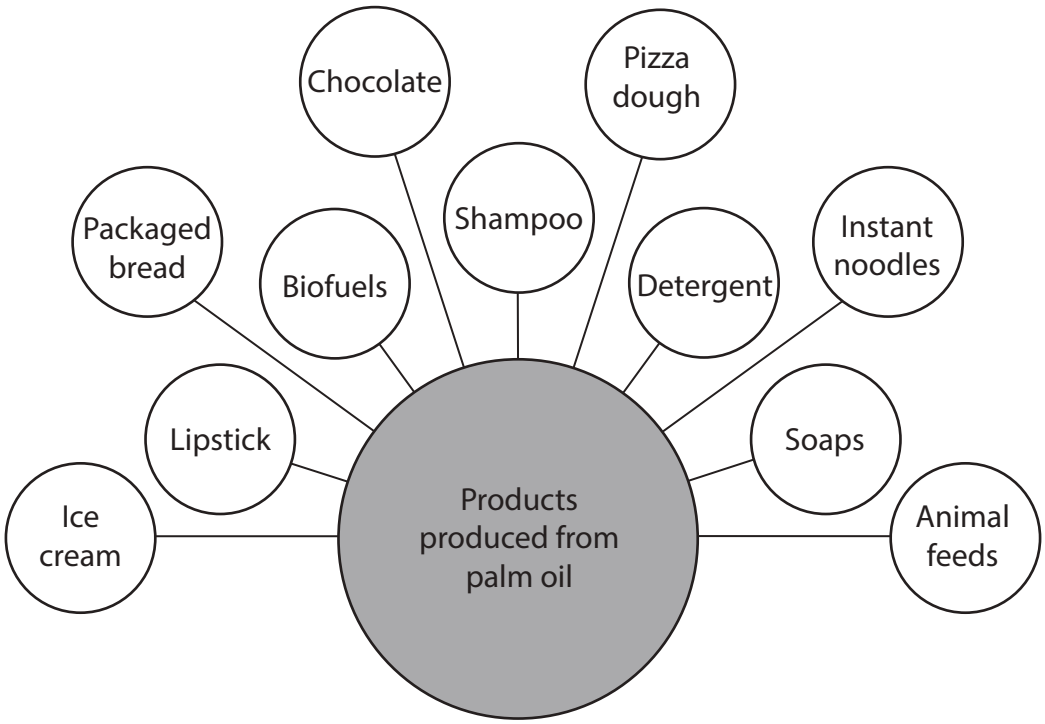


Figure 7a

Global demand is rising for products made using palm oil fruit



Figure 7b

Oil palm fruit

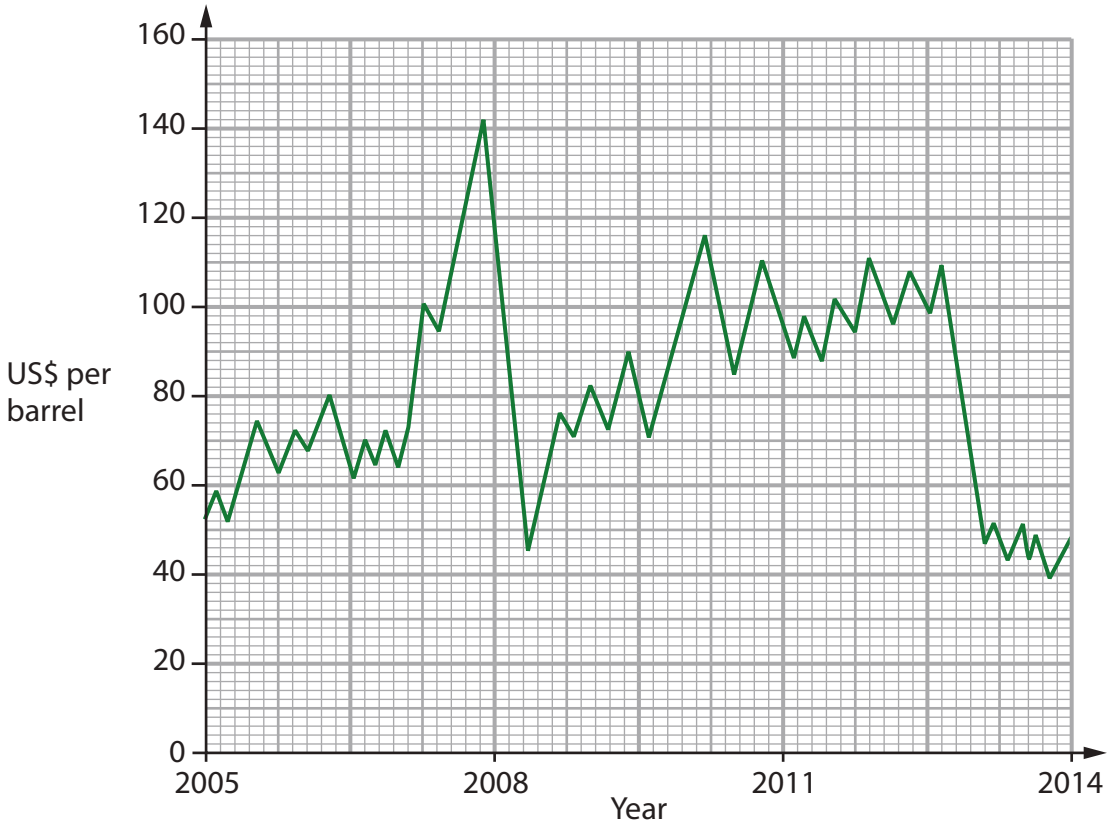


Figure 8a

Fossil fuel oil prices, 2005–2014

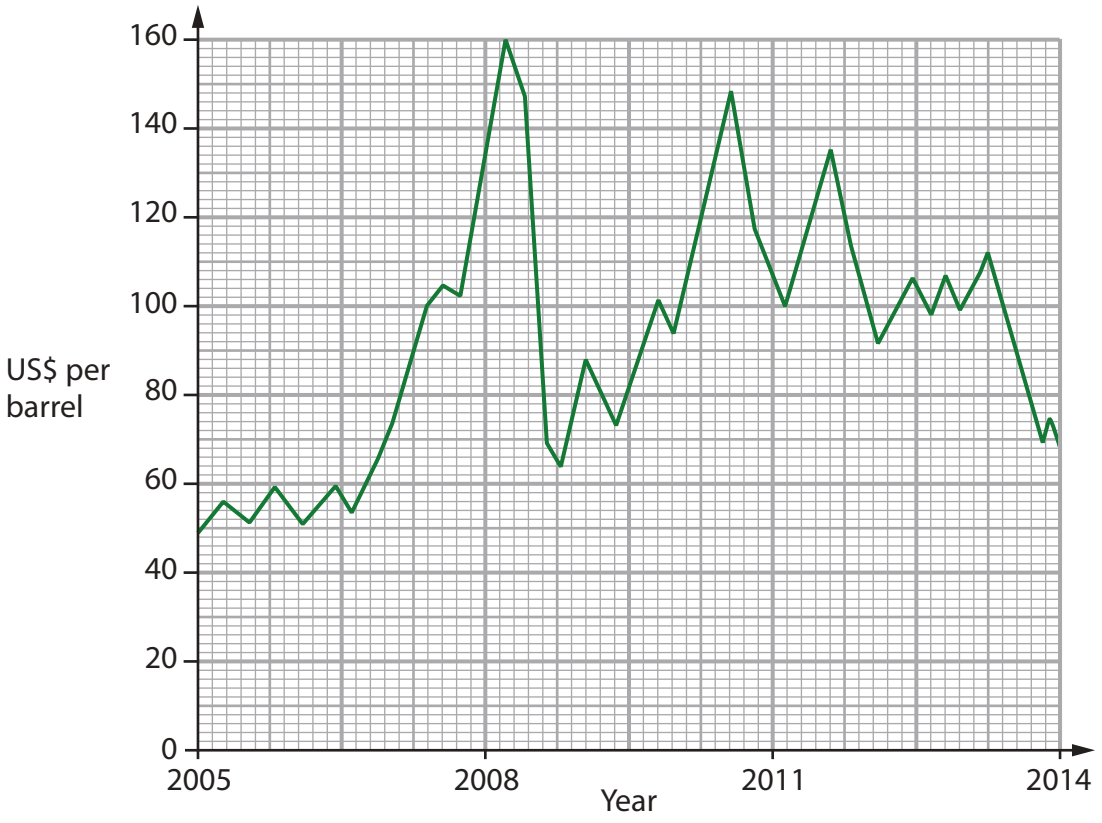
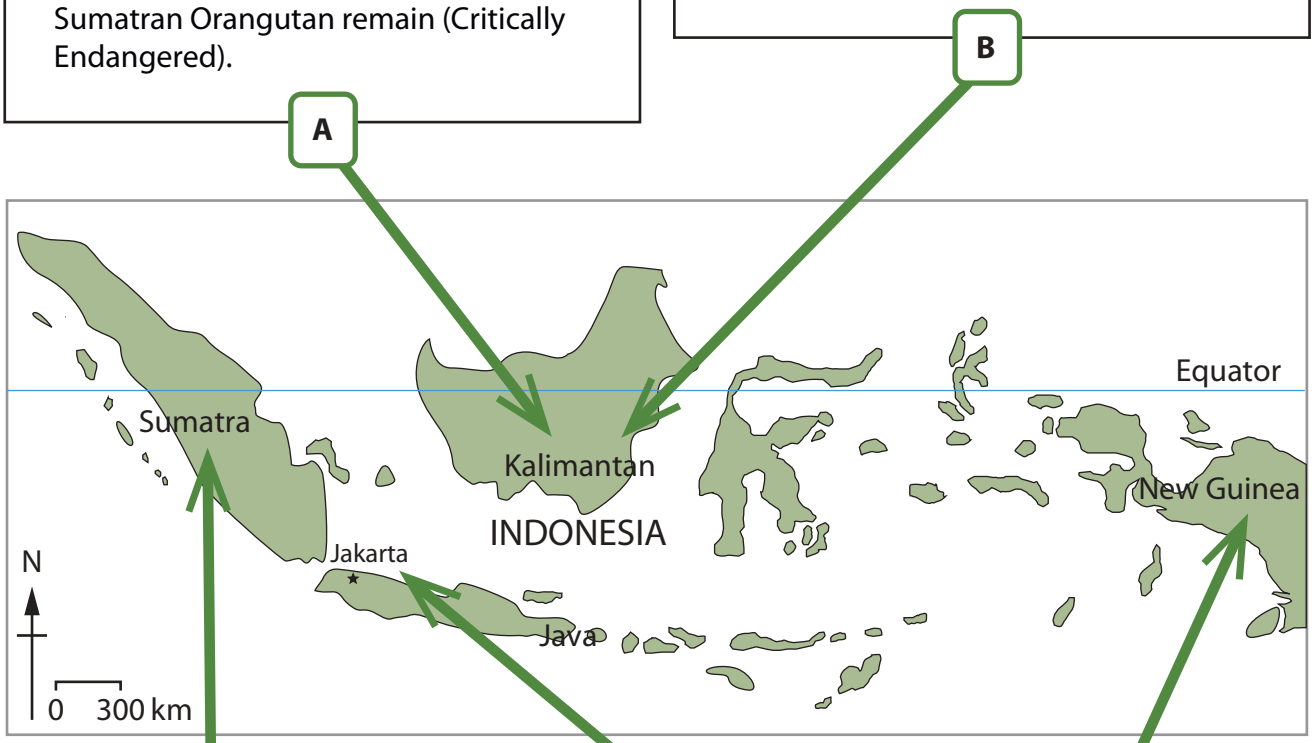


Figure 8b

Palm oil prices, 2005–2014

- 100 years ago, there were 230 000 orangutans.
- Due to habitat loss, the orangutan population in Kalimantan now numbers about 50 000 (Endangered) and only 7 500 Sumatran Orangutan remain (Critically Endangered).

- Half of Kalimantan's rivers suffer from toxic pollution from coal mines, which in turn affects many coastal environments.
- Mining has also led to landscape scarring in many areas.



C

- Forest fires in Sumatra and Kalimantan cause a toxic haze that spreads across Indonesia and other Southeast Asian countries.
- Smoke from forest fires causes large number of deaths including many children aged under 5.

D

- The Seribu Islands near Jakarta have suffered from repeated fossil fuel oil spills between 2004 and 2014.
- The source may have been leaking offshore oil rigs operated nearby by China National Offshore Oil Corp or BP Indonesia.

E

- Deforestation (due to human activities) and heavy rainfall leads to soil erosion throughout Indonesia.

Figure 9

Environmental impacts of energy resource development in Indonesia

The Indonesian government needs to enforce the laws to protect the trees. Brazil's government has done this.

Norway's government

The government keeps selling permits to expand palm oil production areas. Also, some oil palm companies abandon land too quickly when the soil fertility begins to fall. They clear more rainforest every time they want new soil for their oil palms.

A university expert

The killer smoke will carry on and damage to human health will continue. People everywhere eat snack foods and use soap. They don't ask enough questions about where the palm oil used in them comes from or how it is produced.

Pressure group

Our company has pledged to stop deforestation. We will grow more palm trees per unit area in our existing plantations. But when we say we want to save the rainforest, the Indonesian government just sells it to companies who don't care as much as we do.

A palm oil company manager

We want to develop eco-tourism here in Merabu, to attract adventurous tourists. The Norwegians paid us to save some local trees. But then a palm oil company came and cut them down. I think it's impossible to stop the worst companies.

The chief of Merabu, a village in Kalimantan

It is difficult to make some villages obey the rules. A lot of fires are started where local people want to make money from palm oil too. They claim that growing oil palms will speed up the development of their local community.

A government official

Figure 10

Different views about who is most to blame for deforestation in Indonesia

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Mark Scheme (Results)

Summer 2019

Pearson Edexcel GCSE
In Geography Spec B (1GB0) Paper 03

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Mark
1(a)	Award 1 mark for each identified physical factor shown or suggested by the landscape shown in Figure 1 or its title, up to a maximum of 3 marks. For example, credit references to: • Mountains/altitude/height (1) • Slopes/gradient/topgraphy (1) • Rocky ground/rocks (1) or soil (1) • River (limiting growth) (1) • Water supply close to river (1) • Temperature (1) • Precipitation (1) • Nutrients (1) • Drainage (1) • Floods (1) or drought (1) **Do not credit:** Human factors human factors that cannot be inferred form the figure. Global factors such as latitude, biome – all not local **Accept any other appropriate response.**	**(3)**

Question Number	Answer	Mark
1(b)	D Tundra temperate grassland - not at this latitude tropical grassland - not at this latitude desert - not at this latitude	**(1)**

Question Number	Answer	Mark
1(c)	Award 1 mark for any of the following up to a maximum of 2 marks. Answers may relate to specific vegetation or climatic characteristics, or the distribution of the biome. • Deciduous / seasonal trees (1) • Seasonal climate / four seasons / *idea of seasons* ('warmer summer but colder winter') (1) • Hotter/wetter *than another named biome* ('cooler than rainforest') (1) • May rain throughout year (1) or all year round (1) • Northern limit of approximately 40 to 50 degrees (1) • Southern limit approximately 30 to 40 degrees (1) • Covers UK / much of Europe / valid named countries (1) • Structure of forest e.g. mentions multiple layers (1) • Broad leaves (1) • High Biodiversity – relative to other named biome (1) • Detail of food chain e.g. 'top predator is brown bear' (1) • Nutrient rich soils (1) or ground litter (1) **Accept any other appropriate response** ***Do not credit isolated or unqualified climatic statements:*** *e.g. cold/cool winter, hot/warm summer, high rainfall, low rainfall, humid conditions, moderate/median conditions, large temperature range* ***Do not credit:*** *evergreen trees*; named species ('fox')	**1 + 1** **(2)**

Question Number	Answer	Mark
1(d)	Award 1 mark for a basic point and a further mark for an explanation/causality up to a maximum of 2 marks. • More oxygen/O2 added to atmosphere (1) *because* of photosynthesis / CO2 has been taken in (1) • Less CO2 added to atmosphere (1) *because* trees/biomass has stored carbon (1) • Climate change slower (1) *because* carbon taken up by trees (1) • Less greenhouse gases (1) *because* of carbon storage (1) Higher humidity/rain/clouds (1) *because* of transpiration (1) **Accept any other appropriate response**.	**(2)**

Question Number	Answer	Mark
2(a)(i)	C Wolf B rat - not a top carnivore A gorilla and D lion are not native to this environment	**(1)**

Question Number	Answer	Mark
2(a)(ii)	Award 1 mark for a valid **adaptation** for one or more taiga animal species. For example: • White colour/camouflage • fur/feathers/insulation • fat layers • hibernation • (seasonal) migration/migratory **Accept any other appropriate response.** **Do not accept plant adaptations.**	**(1)**

Question Number	Answer	Mark
2(b)	Possible **valid definitions** may refer to: • Non-living (parts of an ecosystem/food web) (1) • Non-biotic (1) • Not biotic / biological (1) • Not plants and animals (1) • Rocks and/or minerals (1) **Accept any other appropriate response.**	**(1)**

Question Number	Answer	Mark
2(c)	Award 1 mark for a basic explanation of a threat shown in Figure 4, and 1 mark for applied knowledge of why it leads to decreased biodiversity (*extinction of species/loss of habitat*) up to a maximum of 2 marks for each reason. • Increased fires (1) leading to *habitat loss* (1) • Pests/parasites (1) could *wipe out some species* (1) • High latitude species 'have nowhere to go' (1) and may *become extinct* (1) • Impact of invading species (1) could mean *net biodiversity loss* (1) **Accept any other appropriate response.** **Note – two reasons why – have to reward**	**2+2** **(4)**

Question Number	Answer	Mark
3(a)(i)	Award 1 mark for correct data set-up and working, and a further 1 mark for correct answer, up to maximum 2 marks. **Accept any appropriate working** using data in the range 5-7 (1973) and 11-13 (2015). For example, award 1 mark for any of the following workings: • 1973 = 6 and 2015 = 11 • (12 - 5) / 5 x 100 • (6,000,000 / 6,000,000) x 100 **Accept any answer within the following range**: 57% to 160% (**1**) **Maximum of one mark if:** • correct answer but no working out/data is shown. • wrong data but right working out with that data.	**1** **1** **(2)**

Question Number	Answer	Mark
3(a)(ii)	Award 1 mark for each piece of evidence indicating carbon footprint reduction over time, to a maximum of 2 marks. • Uses Renewables (1) uses biofuels (1) uses HEP (1) • Use of carbon capture / CCS technology (1) • Decreasing use over time of coal (1) **Accept any other appropriate response.**	**1+1** **(2)**

Question Number	Answer	Mark
3(b)(i)	2001	**(1)**

Question Number	Answer	Mark
3(b)(ii)	D 2,000,000 barrels *Rationale - graph shows approx. 2000 thousand barrels per day in 1992 i.e. 2000,000*	**(1)**

Question Number	Answer	Mark
3(c)	Award 1 mark for each reason based on Figure 7, and 1 mark for each development, up to a maximum of 3 marks. • Norway has the smallest population (5 million) (1) so can export/sell its surplus/spare oil (85%) (1) and use profits to fund services (1) • Norway deliberately chooses to sell most of its oil for profit (1) because it has alternatives (HEP) (1) as a way of generating a very high GDP (1) **Accept any other appropriate response.** Reward information gleaned from other resources – oil used for transport purposes and use of HEP.	**(3)**

Question Number	Answer	Mark
3(d)	In each case, award 1 mark for a specific social benefit (not simply 'services') for Norway's people (Figure 8) and 1 mark for development (may make links with Figure 7 or 8), up to a maximum of 2 marks for **each** benefit.h • Maintains a generous welfare system/maternity/childcare benefits (1) by selling most (85%) of its oil (1) • Support for its ageing population (1) comes from SWF's global investments / 9,000 part-owned TNCs (1) • Norway's 1 HDI ranking shows it must be benefiting socially (1) through education and health funding (1) • Norway can afford generous childcare payments (1) giving parents to choice to work if they want to (1) **Accept any other appropriate response.** ***Do not credit:*** *'pays for vital services' (unclear whether they are social services/benefits)*	**2** **2** **(4)**

Question Number	
3 (e)	**AO3 (4 marks)/AO4 (4 marks)** Answers should focus on both phsycial and human challenges (AO4) and in so doing may make an assessment (AO3) of their severity, etc. **A03** • There are a range of issues and an overview might be that future access is going to become <u>very</u> challenging indeed • The challenges can only increase <u>over time</u> as the sources that are easiest to access are used up • Some physical challenges <u>might be tackled</u> in time with new technology • Political challenges <u>could be harder to overcome</u> with growing global demand for finite fossil fuel supplies • Local, national and global environmental laws stack up to make operations <u>very challenging</u> for companies • A view might be formed about which is the <u>most important</u> challenge **A04** • The latest projects are in even deeper water in the Barents Sea (Figure 9) • Exploration near the Lofoten Islands could be met with protests and opposition (Figure 9) • It is unclear who owns oil found at the boundary of Russian and Norwegian territorial water (Figure 9) • The risks to the settlement of Hammerfest might be viewed too great (although there is already oil in production there) (Figure 9)

	• Eventually it may be necessary to move even further North but this could lead to the challenge of ice cover (Figure 9) • The oil sources shown are all very remote from any markets / are near far north of Norway (Figure 9)

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and
Level 2	4–6	Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question Number	Answer	Mark
3(f)(i)	In each case: Award 1 mark for a basic strategy/way. Award 1 mark for <u>either</u> an explanation of how/why this affects use of oil/gas/coal (i.e. a specified fossil fuel), <u>or</u> explanation of how/why greater efficiency is achieved. • Insulation/double-glazing (1) in houses with gas central heating (1) • Low-energy lightbulbs (1) may reduce amount of natural gas needed by power stations (1) • Public transport (1) reduces petrol used per person (1) • More efficient appliances/batteries e.g. phones (1) need recharging less frequently (1) • Taxes/regulation (1) would prompt people/businesses to use electricicity/petrol more carefully/efficiently (1)	**2 + 2**

	• Solar power/panel technology (1) is now converting solar energy for more efficiently/effectively than before (1) **Accept any other appropriate response.** **Do not credit:** carbon capture / CCS, afforestation, etc.	**(4)**

Question Number	
3 (f)(ii)	**AO3 (4 marks)/AO4 (4 marks)** Answers should focus on **economic** costs and benefits for **local people** (AO4) and assess (AO3) their importance/severity/long-term effects, etc. **A03** • Local people may gain more jobs from developing the oil than they would from other sectors, such as tourism and fishing • Oil industry employment may also offer better quality of local employment (higher pay, full-time, not affected seasonally) • Local people benefit from growth of support services for oil industry • Local fishing employment may be greatly threatened, i.e. oil spills • Oil extraction may scar the landscape irreversibly and prove costly for tourism in the short- and long-term • Perhaps, most importantly, tourism and fishing offer long-term benefits if managed sustainably while oil only last a while longer **A04** • Fishermen believe the impact on their industry will be costly and that the benefits of local oil production will be minor (Figure 10) • Norway's government asserts that using Lofoten oil to fund the state is a necessary and well established strategy (Figure 10) • Tourism operators think the plans are short-sighted because the unique Lofoten environment will be lost along with income (Fig. 10) • The view of younger citizens (university) is that there will be very harmful long-term economic costs (Figure 10) • Older citizens are aware of the benefits that oil money will bring given the immediate context of an ageing population (Figure 10) • The oil company representative believes the local fishing industry can co-exist while the profits can be beneficially invested in new energy research (Figure 10)

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1−3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and
Level 2	4−6	Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7−8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question Number	
4	**AO2 (4 marks)/AO3 (4 marks)/AO4 (4 marks)** In order to fully justify a choice, the candidate must consider all three options and establish a clear argument about the meaning of 'best future' for Norway's economy and the environment (local or global). There is no preferred option. All options can be justified. The balance of the case will vary according to the option chosen. • Option 1 can be justified by suggesting that this would be a progessive action that helps the environment. Norway can lead by example and lead the way in developing new technology. This might also bring economic gains and enhance Norway's international influence more than the Sovereign Wealth Fund did. • Option 2 can be justified by suggesting that it would be hard to replace the income Norway gains from oil. Realistically, this would not be best for the economy and, by extension, Norwegian society. Meanwhile, more could be done to sensibly limit damage to sensitive areas and preserve at least the local environment. • Option 3 can be justified because even if Norway ceases oil production, other countries will not and climate change is thus in any case inevitable. Using oil income to find solutions to climate change may therefore be the best way for Norway to secure its own economic and environmental future given the high threat it faces. **A02** • Attitudes are changing and some governments take climate change seriously • Many people in developed countries want to reduce carbon footprints • Future technologies may be the best alternative to fossil fuels • Attitudes vary and not everyone agrees fossil fuel alternatives are needed • Mining and drilling can do harm to ecologically sensitive areas • Biomes are adapted to very specific climates (temperature, precipitation) **A03** • In the long-term, 'business as usual' oil production is unsustainable even if energy efficiency measures are introduced • The 'best' option for Norway includes what is best for its local environment. • Climate change is probably inevitable unless technological solutions are found, so the best option for Norway's economy could be to use oil money to fund research. • Becoming a respected world leader in renewables might be a better way for Norway to move forwards economically than by having oil wealth. • Other countries are developing alternatives and future technology and there is no need for Norway to be a climate change martyr and give up all its oil wealth • The priority should be making sure sensitive areas like Lofoten are protected but that cannot happen in the long-term if we keep using fossil fuels. **A04** • Norway's oil revenues (Sovereign Wealth Fund) are its main income source (Fig 7). • Norway's SWF also gives the country global economic influence (introduction, Fig 8).

	• But Norway is also a world leader in potentially profitable and environmentally-friendly CCS / renewables (introduction, Fig 5). • Physical and political difficulties are mounting when trying to find new oil and threaten long-term oil revenues (Fig 9 and 6). • On account of its high latitude, Norway's taiga and its food web are especially sensitive to climate change and associated natural threats (Fig 1, 2, 3 and 4). • If protected, Lofoten offers alternative profitable ecosystem services (Fig 10).

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–4	• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and
Level 2	5–8	• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* - Learners write nothing. - Learners' response does not relate to the question. - Learners' achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance:* - Learners spell and punctuate with reasonable accuracy. - Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. - earners use a limited range of specialist terms as appropriate.
SPaG 2	2−3	*Intermediate performance* - Learners spell and punctuate with considerable accuracy. - Learners use rules of grammar with general control of meaning overall. - Learners use a good range of specialist terms as appropriate
SPaG 3	4	*High performance* - Learners spell and punctuate with consistent accuracy. - Learners use rules of grammar with effective control of meaning overall. - Learners use a wide range of specialist terms as appropriate

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Thursday 13 June 2019

Morning (Time: 1 hour 30 minutes) | Paper Reference **1GB0/03**

Geography B

Paper 3: People and Environment Issues – Making Geographical Decisions

You must have:
Resource Booklet (enclosed)
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need*.
- Where asked you must **show all your working out** with **your answer clearly identified** at the **end of your solution**.

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question*.
- The marks available for spelling, punctuation and grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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P 5 6 3 3 9 A 0 1 1 6

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SECTION A

People and the Biosphere

Answer ALL questions. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Use Section A (pages 2, 3 and 4) in the Resource Booklet to answer this question.

(a) Study Figure 1.

Identify **three** local factors affecting where the forest can grow.

(3)

1 .....

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2 .....

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3 .....

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(b) Study Figure 2.

Identify biome X.

(1)

☒ **A** temperate grassland

☒ **B** tropical grassland

☒ **C** desert

☒ **D** tundra

(c) State **two** characteristics of the temperate forest biomes.

(2)

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(d) Explain **one** way increased forest growth could affect the atmosphere.

(2)

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(Total for Question 1 = 8 marks)

TOTAL FOR SECTION A = 8 MARKS

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SECTION B

Forests Under Threat

Answer ALL questions. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

2 Use Section B (pages 5 and 6) in the Resource Booklet to answer this question.

(a) Study Figure 3.

(i) Identify which of the following is most likely to be species Y.

(1)

☒ **A** gorilla

☒ **B** rat

☒ **C** wolf

☒ **D** lion

(ii) State **one** adaptation that helps many taiga animals to survive.

(1)

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(b) Define what is meant by the term **abiotic**.

(1)

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(c) Study Figure 4.

Explain **two** reasons why temperature changes shown in Figure 4 may threaten the biodiversity of Norway's taiga forest.

(4)

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(Total for Question 2 = 7 marks)

TOTAL FOR SECTION B = 7 MARKS

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SECTION C

Consuming Energy Resources

Answer ALL questions. Write your answers in the space provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 Use Section C (pages 7, 8, 9, 10 and 11) in the Resource Booklet to answer this question.

(a) Study Figure 5.

(i) Calculate the percentage change in the use of energy from HEP sources between 1973 and 2015.

Show your working.

(2)

..... %

(ii) State **two** pieces of evidence indicating that Norway is trying to reduce its carbon footprint.

(2)

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(b) Study Figure 6.

(i) Identify the year when total oil production was highest.

(1)

.....

(ii) Identify which of the following is the best estimate of Norway's total oil production per day in 1992.

(1)

- ☒ **A** 200
- ☒ **B** 1,500
- ☒ **C** 150,000
- ☒ **D** 2,000,000

(c) Study Figure 7.

Explain why Norway exports a high percentage of the oil it produces.

(3)

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(d) Study Figure 7 and Figure 8.

Explain **two** social benefits for Norway's people from selling its oil.

(4)

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(e) Study Figure 9.

Assess the challenges Norway faces in developing new offshore oil sources.

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(f) (i) Explain **two** energy efficiency strategies that can help fossil fuel supplies last longer.

(4)

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(ii) Study Figure 10.

Assess the economic costs and benefits for local people of developing this oil.

(8)

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(Total for Question 3 = 33 marks)

TOTAL FOR SECTION C = 33 MARKS

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SECTION D

Making a Geographical Decision

Answer ALL questions. Write your answers in the space provided.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and your use of specialist terminology.

4 Study the **three** options below for Norway.

Option 1: Set an example to other countries by stopping oil production altogether.

Option 2: Use up existing oil resources but stop looking for new oil fields.

Option 3: Continue to explore and develop all new oil fields.

Select the option that offers the best future for Norway's people and its environment.

Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(12)

Chosen option .....

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 4 = 16 marks)

TOTAL FOR SECTION D = 16 MARKS
TOTAL FOR PAPER = 64 MARKS

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Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Thursday 13 June 2019

Morning (Time: 1 hour 30 minutes) | Paper Reference **1GB0/03**

Geography B

Paper 3: People and Environment Issues – Making Geographical Decisions

Resource Booklet

Do not return this Resource Booklet with the question paper.

Turn over ▶

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SECTION A

People and the Biosphere

The issue: Conflicts over oil and the environment for Norway and its people.

- Norway meets much of its own energy needs with hydro-electric power (HEP), a renewable source.
- Since the 1970s, vast amounts of oil and gas have been discovered offshore and exploited, most of which Norway exports.
- Existing oil fields may soon run dry, forcing Norway to either look for new oil sources or find other ways of maintaining economic growth.
- Oil production in deep offshore waters is challenging and expensive, while production in coastal waters threatens the land environmentally.
- Many Norwegians think it may be time for the country to turn its back on fossil fuel production.

Introduction

- Norway is a developed country in northern Europe which is home to only 5 million people. Much of its wealth comes from oil fields, most of which are owned and managed by the government.
- The country is extremely vulnerable to climate change. Much of the taiga (boreal) forest, which covers large areas of Norway, is threatened by rising temperatures.
- Norway is a signatory to the Kyoto Protocol and has agreed to significantly reduce carbon emissions from the oil and gas it still uses to power cars and heat homes.
- The government of Norway has proposed that the country should reduce its carbon footprint to zero by 2050. Greenpeace has called on Norway to also take responsibility for the 500 million tonnes of overseas carbon emissions caused by its exports of oil and gas.
- Norway is an important global player in trying to tackle climate change using technology.



Figure 1

Taiga forest in northern Norway

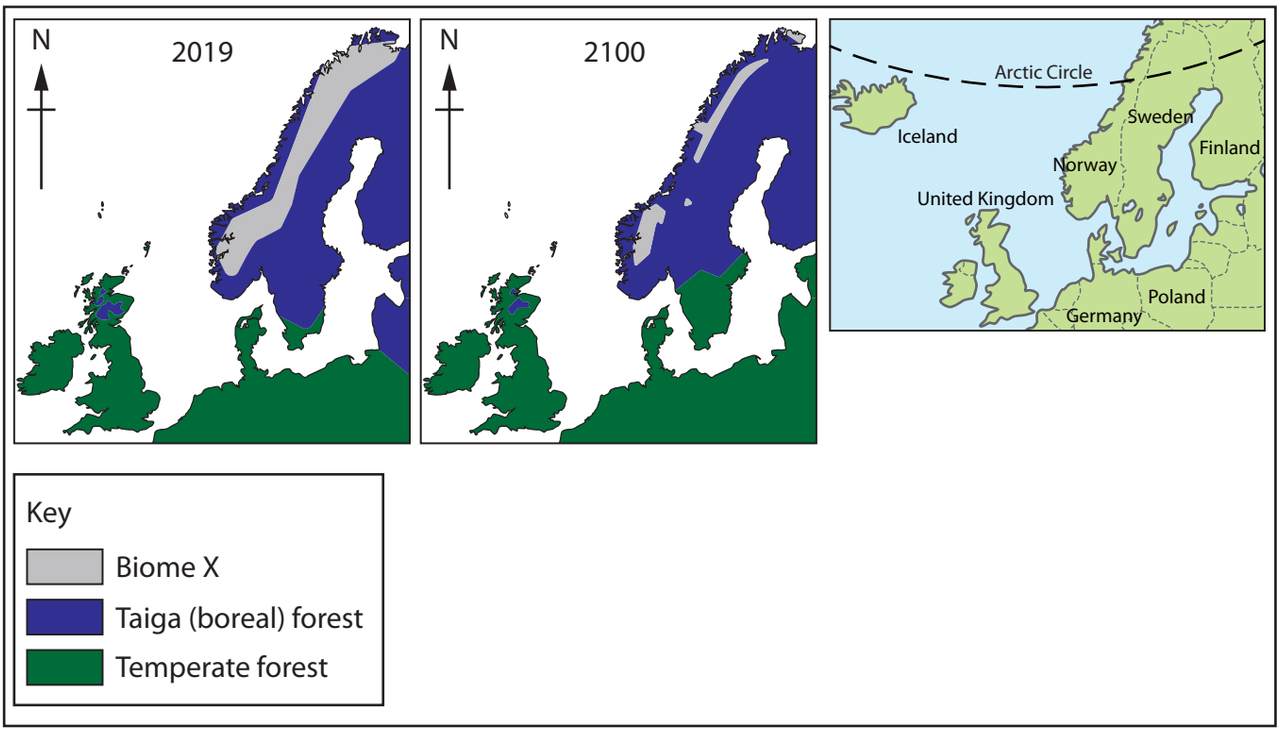


Figure 2

Predicted changes in the distribution of biomes in northern Europe, 2019–2100

SECTION B

Forests Under Threat

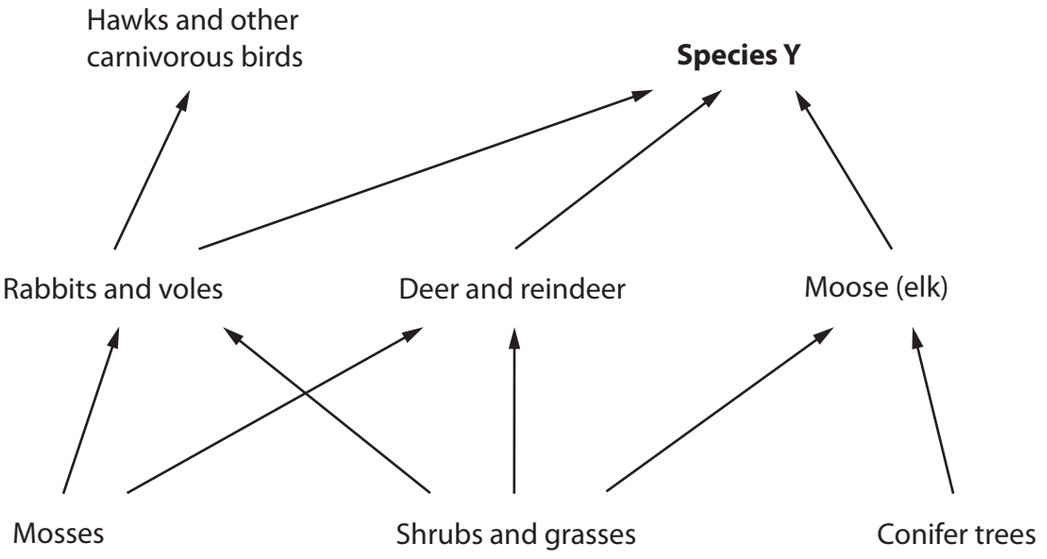
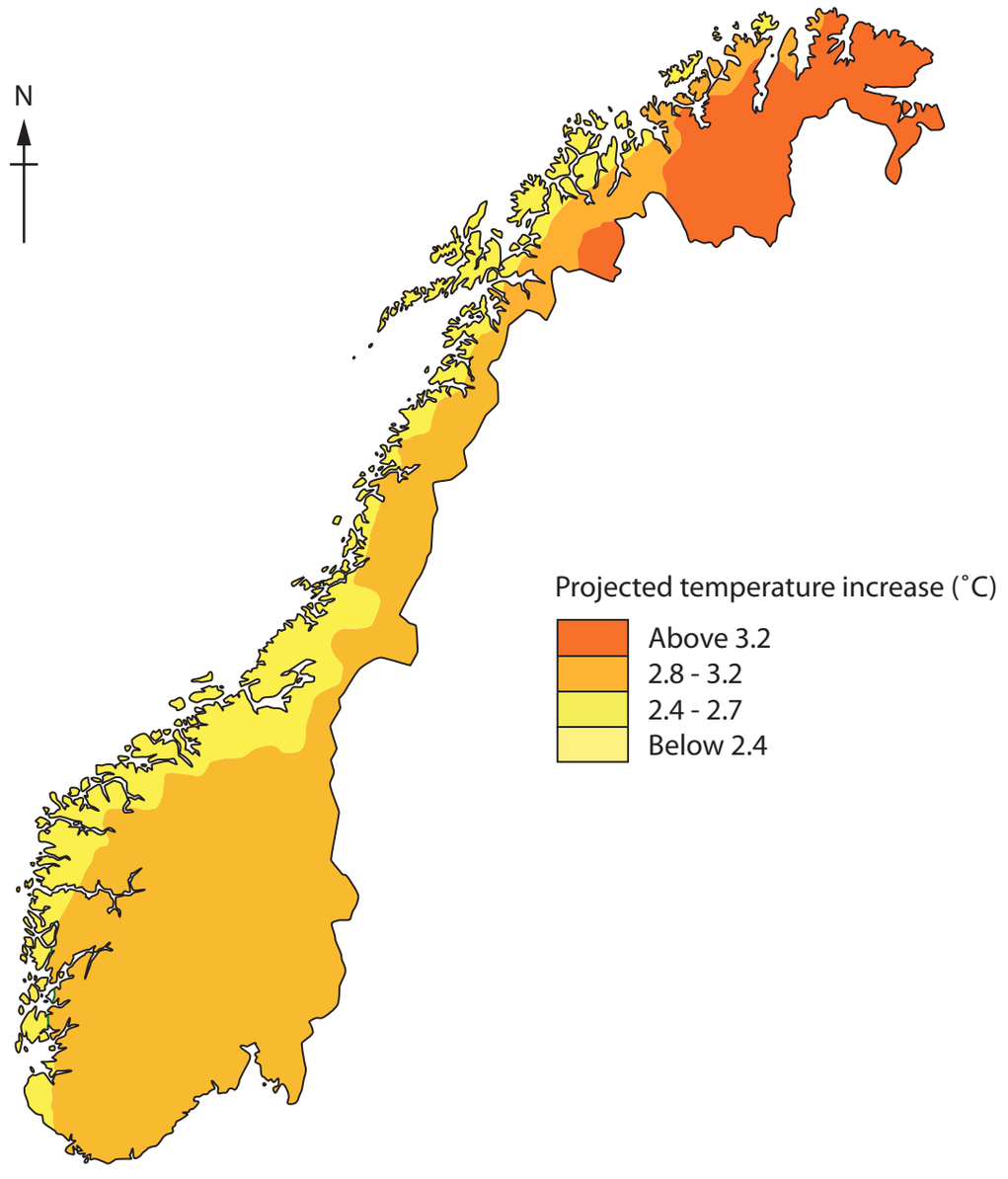


Figure 3

A simplified taiga (boreal) forest food web for northwest Europe



Higher temperatures could increase the chance of fires from lightning strikes.

A warmer summer will help parasites and pests to spread.

Low temperatures currently make it difficult for some invading species to become established.

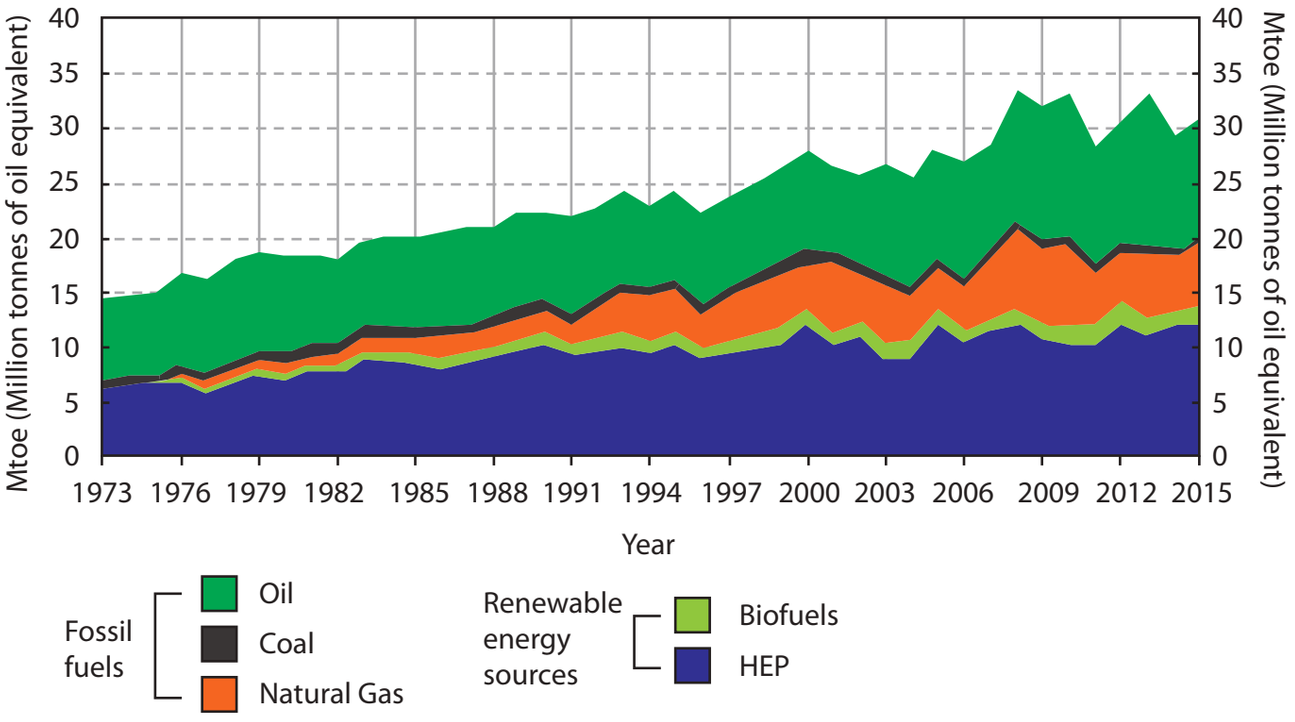
Species in high latitudes are most at threat because they have nowhere else to go.

Figure 4

Projected temperature change (2100) and its possible impacts on Norway's environment

SECTION C

Consuming Energy Resources



- Norway uses about 10 million tonnes of oil annually, most of it for transport.
- A significant proportion of the energy Norway uses comes from HEP, including 95% of all electricity production.
- Norway was the first country to use a carbon capture and storage (CCS) project. This works by trapping carbon dioxide from burning gas and storing it underground. Although a small-scale pilot project, it offers hope for the future.

Figure 5

Energy use fact file for Norway

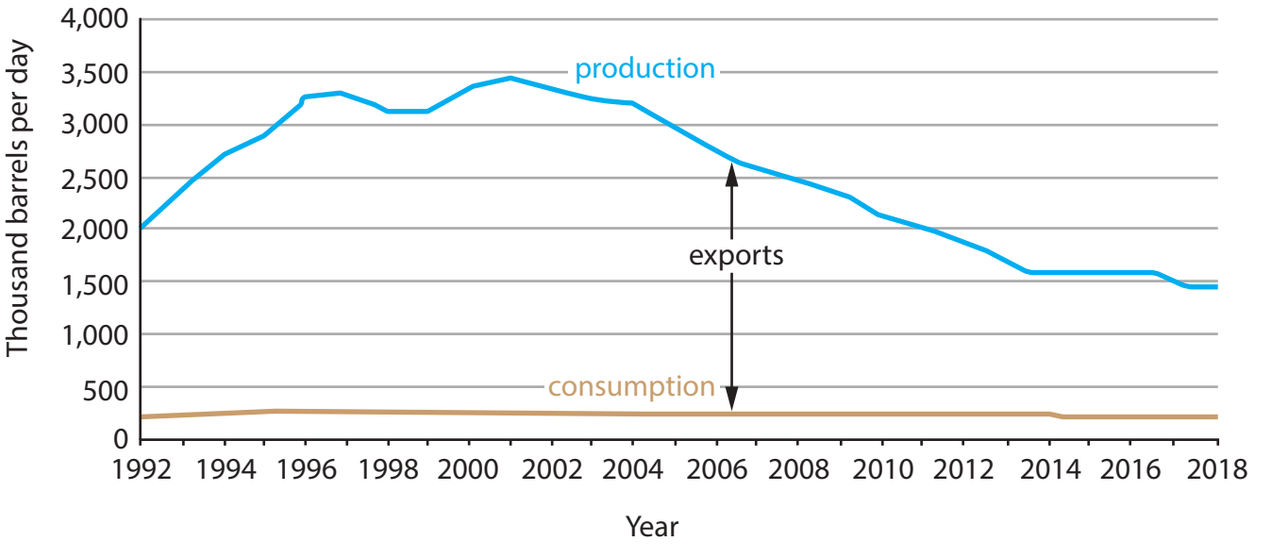


Figure 6

Oil production and domestic consumption in Norway, 1992–2018

Country	Oil exports as a percentage (%) of total oil production	Population (millions)	Land area (thousand km^2)	Gross domestic product (GDP) per capita (US $)	World ranking as an oil exporter
Norway	85	5	323	71,000	12
Russia	77	144	17,125	28,000	2
Saudi Arabia	88	32	2,150	55,000	1

Figure 7

A comparison of three major oil-exporting countries, 2016

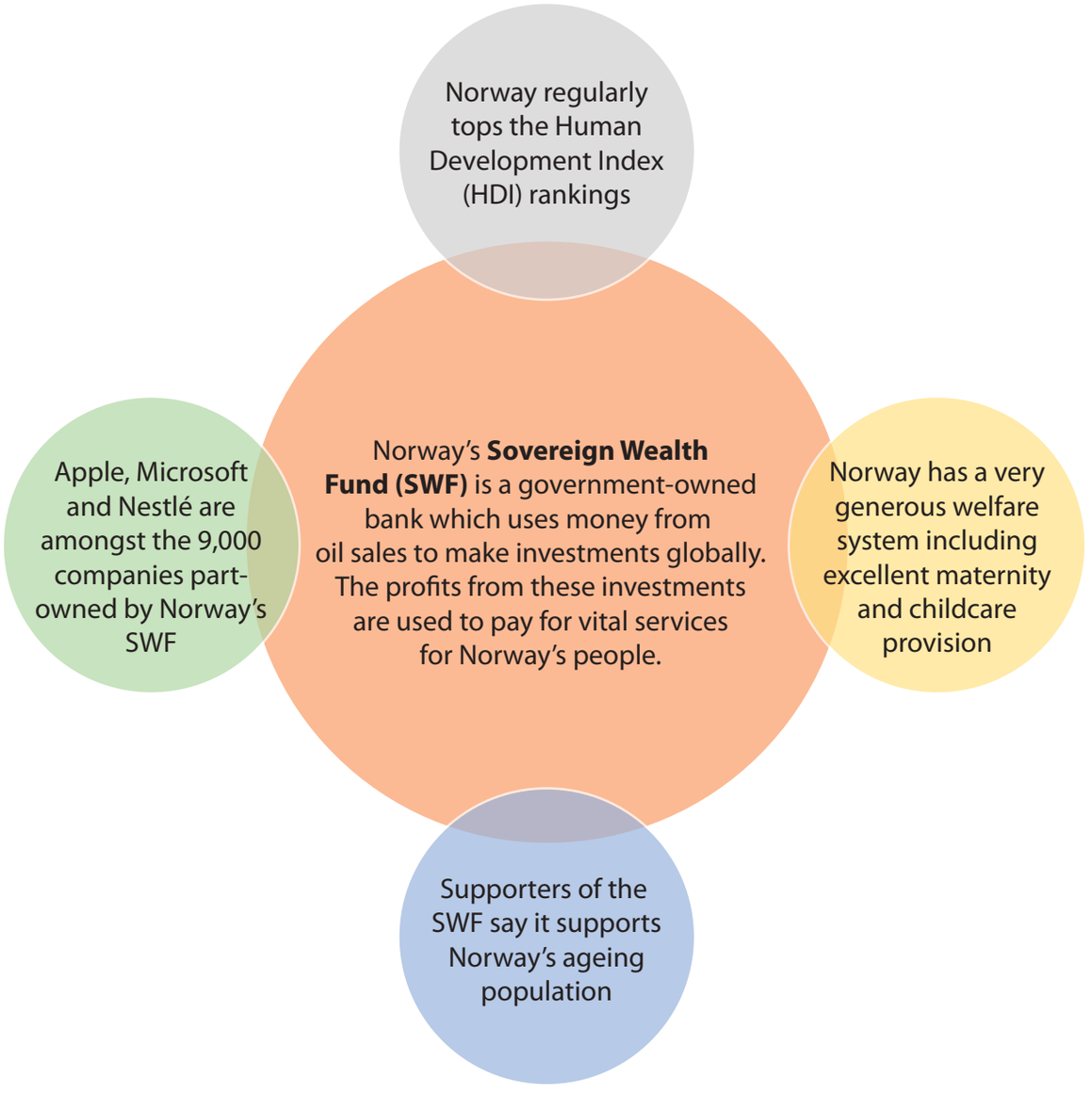


Figure 8

Information about Norway's Sovereign Wealth Fund (SWF)

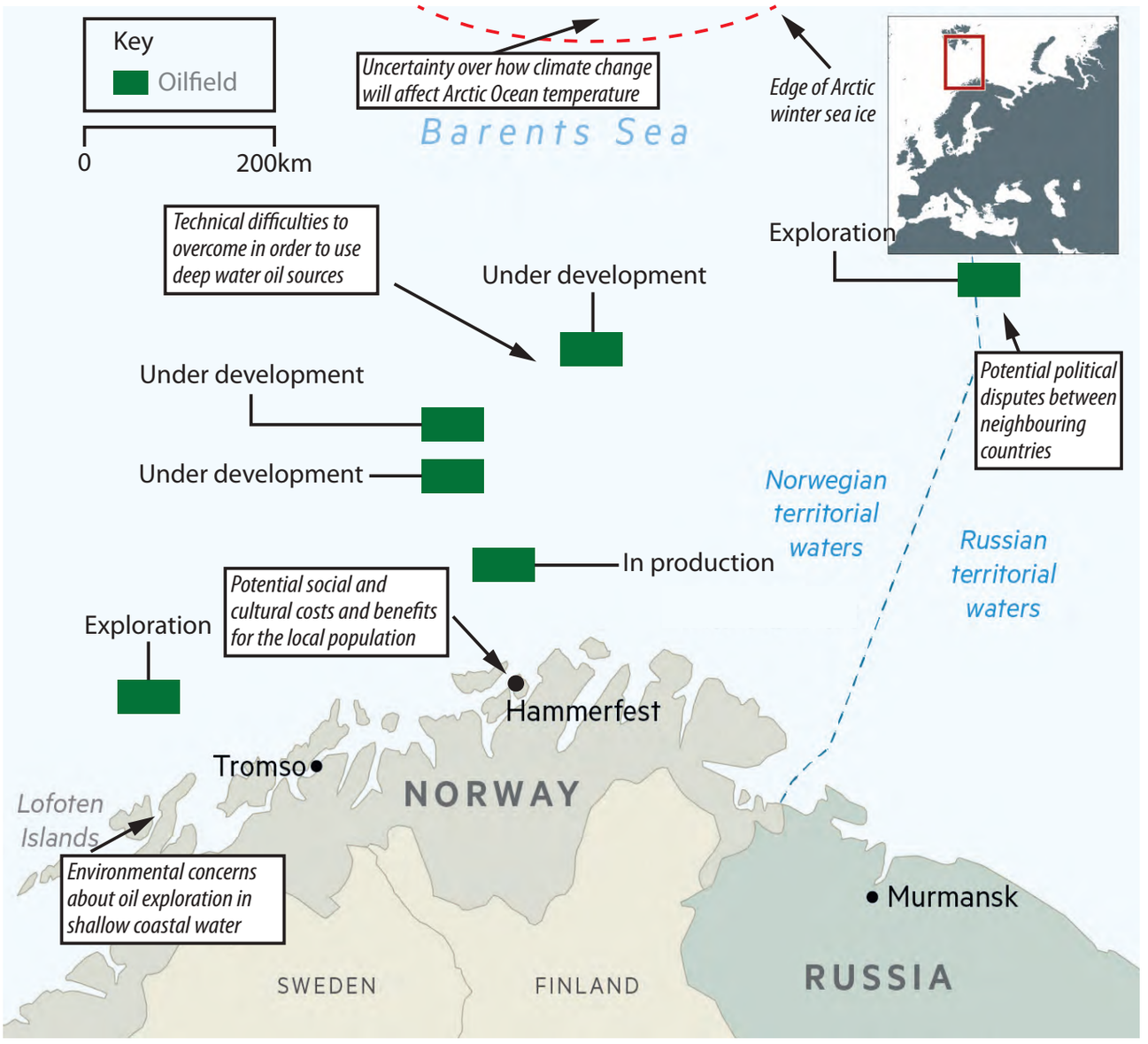


Figure 9

Factors that may affect Norway's future development of new offshore oil sources

It is totally idiotic to start producing oil here in the Lofoten Islands. There will be oil spills and the fish will die. The government says oil production will bring 400 new jobs but that's a pathetic number.

Lofoten Islands fisherman

We have always survived as a nation by making the most of our energy resources. Our Sovereign Wealth Fund has long supported remote and challenging regions in our country, such as the Lofoten Islands. We still need as much oil as possible to maintain this fund.

Government minister

Lofoten is "the Amazon rainforest of Norway." It is the most unique area, but exploiting oil resources here will ruin everything, and visitors will stop coming. That is why this battle is so important.

Lofoten Islands hotel owner

The Norwegian government is two-faced. On the one hand they say it is time to stop climate change, but they keep selling oil to countries where not enough is being done to reduce carbon footprints. Nowhere will prosper, including the Lofoten Islands, if the world keeps warming.

Norwegian university student

We need Norway to stay rich. There are fewer young people than there used to be to keep the economy running. The world is becoming a dangerous place and we need to look out for ourselves.

Norwegian pensioner

I can't see why the fishing and oil industries can't coexist responsibly. And we'll use the profits from the Lofoten Islands' oil to keep researching and developing new energy technology that could have global benefits.

Oil company representative

Figure 10

Conflicting views about developing the oil resources around Norway's Lofoten Islands

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Figure 1: © Guillermo Avello/Alamy Stock Photo

Figure 9: Oil exploration in Norwegian Arctic faces sea of opposition by Richard Milne © Financial Times - September 2017

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Summer 2022

Pearson Edexcel GCSE
In Geography Spec B (1GB0) Paper 03



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Summer 2022
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- **General Marking Guidance**

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Mark
1(a)	2002	**(1)**

Question Number	Answer	Mark
1(b)	Award 1 mark for any of the following: • Rising affluence / richer people wealthier country (1) • Country becomes more developed / HDI score rises (1) • Period of growth / boom after a recession (1) • Industrialisation / new industry (or example of this) (1) • New use of a previously unused resource e.g. cobalt (1) <u>Marking guidance</u> Do not credit statements where *no change over time* can be inferred e.g. 'People always need resources' or 'The industries need more resources.' **Accept any other valid economic, technological or political reasons for *rising demand*.**	**(1)**

Question Number	Answer	Mark
1(c)	Award 1 mark for use of data from Figure 1, and 1 mark for a statement which explains or implies that population can <u>double</u> over <u>30 years.</u> For example: • Population already doubled from 1990 to 2020 (1) when it grew from 15 to 30 million (1) • From 1960 to 1990 Ghana grew from 7.5 to 15 m (1) which is as long as 2020 to 2050 (1). • The fertility rate is 4 (1), so in 30 years' time there could be four children per two adults (1) Award 1 mark only for a partially focused explanation, such as: 'The population rise is very steep, so it'll easily double.' (1) or 'Population grows by millions every few years, so it will keep on increasing.' (1) **Accept any other appropriate analytical response making use of the demographic data provided**.	**(2)**

Question Number	Answer	Mark
1 (d)	Award 1 mark for any way in which mining can lead to tree loss / deforestation, up to a maximum of 2 marks. For example: • Clearing of forest for mining / machinery (1) • Deforestation for settlement (1) • Chemicals kill trees / water is polluted (1) • Miners burn wood as fuel for cooking, etc. (1) • Soils are washed away due to human activity (1) • Roads are built to transport the gold (1) Do not award 1 mark for 'trees are cut down' or 'deforestation' unless a valid / possible link between this tree loss and mining has been identified. Accept any valid analytical / interpretive suggestion, provided answers are visible in photograph or might be inferred from the photograph.	**1 + 1** **(2)**

Question Number	Answer	Mark
1(e)	Award 1 mark for a basic explanation and 1 mark for further development, up to a maximum of 2 marks. For example: • Without interception cover / protection / canopy (1) rainwater will wash soil away (1) • Tree roots bind soil (1) and without them soil is eroded / blown by wind (1) • Nutrients come from plants (1) and loss leads to lower soil fertility / poor soil health (1) • Litter and dead leaves are needed (1) without which soil nutrients become less (1) • Vegetation and soil are interdependent (1) and need each other for their health (1) **Accept any other appropriate response**.	**(2)**

Question Number	Answer	Mark
2(a)(i)	C Between August and September *Rationale – rises by 80 mm (around 50 %)* A) Incorrect - April-May rises by 20 mm (small %) B) Incorrect May-June – rises by 60 mm (small %) D) Incorrect - September-October rises 60 mm (small %)	**(1)**

Question Number	Answer	Mark
2(a)(ii)	80 mm	**(1)**

Question Number	Answer	Mark
2(b)	A and E Rationale – these are rainforest adaptations (to shed water and maximise growth). B and D relate to Taiga forest not rainforest C is not a plant adaptation, it is a biome characteristic	**1 + 1** **(2)**

Question Number	Answer	Mark
2(c)	In each case: - Award 1 mark for a relevant vegetation change, based on Figure 4, which might affect rainforest animals. - Award 1 mark for an explanation of how/why this may impact on rainforest animals. For example: • Birds/insects/climbing animals lived in the tall emergents (1) but now no suitable habitat remains (1) • Rainforest fruits / flowers were a food source for animals (1) but there are no alternatives / substitutes in the cocoa plantation (1) • Fewer food sources for animals so some migrate /die out (1) because changes bring less plant diversity (1) • Damp, shaded forest floor may have protected insects/frogs (1) so easier prey for carnivores (1) <u>Extra guidance</u> Award 1 mark only for each explanation which is not linked *clearly enough* to the Figure e.g. 'Animals have lost their habitat/home/food so die/migrate'. **Accept any other appropriate response**.	**2 + 2** **(4)**

Question Number	Answer	Mark
3 (a)(i)	Gold	**(1)**

Question Number	Answer	Mark
3(a)(ii)	C $\frac{5194 - 3100}{3100} \times 100$ Rationale – this is the only correct formula with the change divided by the original value (times 100).	**(1)**

Question Number	Answer	Mark
3 (b)	Angola	**(1)**

Question Number	Answer	Mark
3 (c)	In each case, award 1 mark for a way and 1 mark for further explanation. Explanations, based on the Figures, may include: • If Ghana finds new oil, its GDP per capita could rise above $5,194 (Fig 5) (1) given that large producers (Fig 6) all have higher figures than this (1) • If new oil discoveries are NOT in Ghana but elsewhere then Ghana's economy might shrink (1) due to increased competition from its neighbours (Fig 6) (1) • % contribution of gold (or other sector in Fig 5) could fall (1) if production is as high as other countries (Fig 6) (1) • Oil is less than a quarter of Ghana's exports (Fig 5) (1) but this % is likely to increase if more offshore fields are discovered and developed (1)	**2 + 2** **(4)**

Question Number	Answer	Mark
3 (d)	B Rationale – this is the only correct distance. The others are clearly larger or smaller.	**(1)**

Question Number	Answer	Mark
3 (e)	Award 1 mark for each reason and 1 mark for further explanation, up to a maximum of 2 marks each: <u>Physical</u> • Oil only found in some locations / places (1) linked with geological conditions / sedimentary rocks (1) • Oil is produced over millions of years from organic / carbon-rich remains (1) but the local conditions needed for this are not found everywhere (1) • Forest cover / other landscape characteristics e.g. relief (1) makes reserves too costly to access or develop, or hinder infrastructure development (1) • Oil may be too deep (onshore of offshore) (1) which drives up extraction cost beyond profitability (1) <u>Economic</u> • Oil development can be very expensive (1) for example specialist drilling equipment. (1) • World's poorest countries lack the money needed to exploit their oil (1) in the absence of assistance e.g. foreign TNCs. (1) • Expensive technology is required to exploit some oil resources (shales) (1) and only high- or middle-income countries may make this investment. (1) Award 1 mark only for answers like: 'Oil reserves are too deep and so the oil is too expensive to use' or 'Countries are not developed and so they lack the money needed to develop their oil'. In both cases, insufficient explantaion is provided for the award of 2 marks. **Accept any other appropriate response**.	**2 + 2** **(4)**

3 (f)	**AO3 (4 marks)/AO4 (4 marks)** Answers should address the similarities and differences between the two views. The assessment may offer an overview of how much (dis)agreement there is. **A03** • Both writers agree that TNC are important / major players in Ghana, though they are portrayed more negatively in View 2, and more as partners in View 1. • Both writers strongly agree that Ghana skills shortages and foreign aid are concerning issues. • Both writers think development mistakes have been made, though View 1 sees them more in the past now. • Writer A thinks that oil development will benefit Ghana but writer B argues TNCs will always benefit most from Ghana's resources. • Writer B seems far less optimistic about Ghana's future. • Overall, the views seem very different, mainly because of the very different perspectives of the writers on TNCs - this is where they seem to differ most. **AO4** • Writer A describes the exciting data from Kosmos (Figure 8) • Writer A describes past dependency on cocoa exports (Figure 8) • Writer A describes the skills shortages which still prevail in Ghana, and we can infer there are no management or engineering courses yet on offer (Figure 8) • Writer B describes how only 2% of profits from gold make their way back to Ghana as TNCs exploit poor countries to promote growth elsewhere (Figure 8) • Writer B describes the way TNCs have siphoned off US$ 100 billion (Figure 8) • Writer B describes oil as being 'not much better' than other industries (Figure 8)

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question Number	Answer	Mark
3 (g)	In each case, award 1 mark for a reason based on information or ideas from Figure 9, and 1 mark for further explanation using own knowledge, up to 4 marks. For example: • More fossil fuels are being used overall (1) due to world population growth over time (1). • New technologies require more energy (1) which could help explain rise in coal use around 2010 (1). • Rising affluence among consumers (1) for example China / India / emerging countries (1). • 'Other fossil fuel' use (also in Fig 9) has grown (1) which might be shale gas exploitation in the USA (1). • Deforestation linked with fossil fuel extraction indirectly adds CO2 to the atmopshere also (1) due to carbon storage losses (1). Expect explicit use of evidence from the Figure for award of full marks. With no evidence at all, award up to 3 marks. **Accept any other appropriate response**.	**2 + 2** **(4)**

3 (h)	**AO3 (4 marks)/AO4 (4 marks)** Answers should address environmental challenges profiled in Figure 10. The assessment may offer a view of which is most severe/concerning, and why. **A03** • Loss of rainforests could involve an *irreversible* loss of species • Coastal flooding is expected *on a large scale* along large parts of the coastline • Warmer water has *knock on effects* for the whole food chain not just certain vulnerable species • Water shortages *may not be so severe* unless there is a greater rainfall reduction • The combination of impacts poses *a severe threat to farmers especially* • There is a range of projected temperature rises *so severity will depend on this* **AO4** • Forests may be replaced with grasslands with fewer habitats (Figure 10) • 4% rainfall decrease could bring HEP shortages may occur (Figure 10) • 190mm rise in sea level could be devastating for Accra (Figure 10) • 5.8C temperature rise might mean all 2 million people who fish can no longer earn a living (Figure 10) • Volta delta farmlands are threatened by sea-level rise and also by a changing climate (Figure 10) • Food supplies are threatened by shorter growing season (Figure 10)

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Q	Indicative content
4	**AO2 (4 marks)/AO3 (4 marks)/AO4 (4 marks)** In order to fully justify a choice, the candidate must consider all three options and establish a clear argument. There is no preferred option. All options can be justified as helping development - though rate and sustainability of growth can be questioned. Option 1 – stopping oil production makes sense in the long-term. An educated, skilled population might develop the country's existing resources themselves in more sustainable ways. Option 2 – maintaining a range of industries makes sense as it provides a wide range of employment opportunities and ways of making money. However, all currently have economic and environmental drawbacks and reforms will be needed. Option 3 – a focus on oil could bring stronger economic growth in the short-term. However, oil wealth does not always trickle-down for universal social development. Oil contributes to climate change with long-term sus. development implications for Ghana. **AO2** • Oil continues to be a high-value product for which there is strong and still-growing global demand, but brings risks as the Gulf of Mexico disaster showed. • If new technologies like carbon capture and storage succeed, oil could continue to have value • Afforestation schemes and stricter regulations could limit the damage done by gold and cocoa producers; some TNCs are responsible; Fairtrade schemes help farmers • Population growth can stimulate innovation (Boserup's model) and ecotourism projects or new technologies could offer alternative economic development routes • Climate change brings a range of developmental threats to lower-income countries **AO3** • Development has social, economic and environmental strands (sus. development) and some development pathways balance these better than others. • Oil could bring short-term growth but there are long-term costs of 'business as usual' fossil fuel use that could harm the development of Ghana. • However, oil wealth may not trickle-down to many people who stay in poverty, and profits may all end up in the pockets of TNC shareholders, not Ghanaian people • Having a diverse economy spreads risk if any sector fails or generates too many challenges, and ultimately may be the safest long-term option for sustained economic growth (oil suffers from price cycles, for example) • However, Ghana's population is still increasing so the harm done by traditional industries may only grow and become costlier to fix • Population growth may provide the impetus to diversify further and develop new industries and technology; but income is still needed in the short-term **AO4** • Oil has helped economies to grow in other African countries and new sources may exist for Ghana (Figure 7) • Unsustainable costs of fossil fuel use (Figures 9 and 10) will only worsen if nothing done, based on projections and expert views • Agriculture (including cocoa) and mining have already helped Ghana's economy grow over time (Figure 5) • Traditional industries harm the environment in ways which could be costly to fix (Figures 2, 4) while profits may end up with TNCs not Ghana (Figure 8) • Oil production has done little to help ordinary people develop in other African countries where poverty is high (Figure 6) • Improving education would mean Ghana can develop a multiplier effect around it current industries (Figure 8) or grow its universities (Figure 10)

Level	Mark	Descriptor
	0	• No acceptable response
Level 1	1–4	• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)
Level 2	5–8	• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance:* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1GB0/03**

Geography B

PAPER 3: People and Environmental Issues Making Geographical Decisions

You must have:
Resource Booklet (enclosed)
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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SECTION A

People and the Biosphere

Answer ALL questions. Write your answers in the spaces provided.

1 Use Section A (pages 3 and 4) of the Resource Booklet before answering this question.

(a) Study Figure 1.

Identify the year when Ghana's population reached 20 million.

(1)

(b) More resources are needed when a country's population increases in size.

Using your own knowledge, state **one other** reason why the demand for resources may grow over time.

(1)

(c) Ghana's population is predicted to double in size between 2020 and 2050.

Explain **one** way in which the graph in Figure 1 supports this prediction.

Use data from Figure 1 in your answer.

(2)

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(d) Study Figure 2 in the Resource Booklet.

Using Figure 2, identify **two** ways in which mining leads to vegetation loss.

(2)

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(e) Using your own knowledge, explain **one** way in which soil can be damaged by the loss of vegetation.

(2)

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(Total for Question 1 = 8 marks)

TOTAL FOR SECTION A = 8 MARKS

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SECTION B

Forests Under Threat

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

2 Use Section B (pages 5 and 6) in the Resource Booklet to answer this question.

(a) Study Figure 3.

(i) Identify when the greatest increase in precipitation occurs.

(1)

- ☒ **A** between April and May
- ☒ **B** between May and June
- ☒ **C** between August and September
- ☒ **D** between September and October

(ii) Identify the **modal** amount of monthly precipitation.

(1)

..... mm

(b) Using your own knowledge, identify **two** ways in which plants in tropical rainforests are adapted to the climate.

(2)

- ☒ **A** drip-tip leaves
- ☒ **B** cone-shaped trees
- ☒ **C** low biodiversity
- ☒ **D** needle-shaped leaves
- ☒ **E** buttress roots

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(c) Study Figure 4 in the Resource Booklet.

Explain **two** ways in which the changes shown in Figure 4 may lead to the loss of tropical rainforest animals.

(4)

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(Total for Question 2 = 8 marks)

TOTAL FOR SECTION B = 8 MARKS

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SECTION C

Consuming Energy Resources

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 Use Section C (pages 7 to 12) in the Resource Booklet to answer this question.

(a) Study Figure 5.

(i) Identify Ghana's most valuable export in 2019.

(1)

.....

(ii) Identify how you would work out the percentage increase in GDP per capita from 2010 to 2019.

(1)

☒ **A** $\frac{3100+5194}{3100}\times 100$

☒ **B** $\frac{3100+5194}{5194}\times 100$

☒ **C** $\frac{5194-3100}{3100}\times 100$

☒ **D** $\frac{5194-3100}{5194}\times 100$

(b) Study Figure 6 in the Resource Booklet.

Identify which country started oil production first.

(1)

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(c) Study Figures 5 and 6 in the Resource Booklet.

Using evidence from Figures 5 and 6, explain **two** ways in which Ghana's economy might be affected by the development of new oil resources.

(4)

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(d) Study Figure 7 in the Resource Booklet.

Identify the distance between Axim and the centre of the Jubilee Field.

(1)

- ☒ **A** 70 km
- ☒ **B** 100 km
- ☒ **C** 170 km
- ☒ **D** 1000 km

(e) Using your own knowledge, explain **one physical** and **one economic** reason why oil resources can only be developed in certain places.

(4)

Physical reason

Economic reason

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(f) Study Figure 8 in the Resource Booklet.

Assess the similarities and differences between the two views.

(8)

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(g) Study Figure 9 in the Resource Booklet.

Using evidence from Figure 9 and your own knowledge, explain **two** reasons for the rise in global CO_2 emissions from fossil fuel use since the year 2000.

(4)

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(h) Study Figure 10 in the Resource Booklet.

Using evidence from Figure 10, assess the environmental challenges which climate change may bring to Ghana.

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(Total for Question 3 = 32 marks)

TOTAL FOR SECTION C = 32 MARKS

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SECTION D

Making a Geographical Decision

Answer Question 4. Write your answer in the space provided.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and your use of specialist terminology.

4 Study the three options below for Ghana's government to develop its economy so that it is no longer reliant on overseas aid.

Option 1: Stop looking for new oil and focus on educating Ghana's growing population

Option 2: Keep supporting the gold, cocoa and oil industries in order to increase Ghana's national income

Option 3: Focus on developing Ghana's oil industry but discourage any new gold mining or cocoa production

Select the option that you think is best for the future development of Ghana.

Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(12)

Chosen option .....

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 4 = 16 marks)

TOTAL FOR SECTION D = 16 MARKS
TOTAL FOR PAPER = 64 MARKS

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Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1GB0/03**

Geography B

PAPER 3: People and Environmental Issues
Making Geographical Decisions

Resource Booklet

Do not return this Booklet with the question paper.

Turn over ▶

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SECTION A

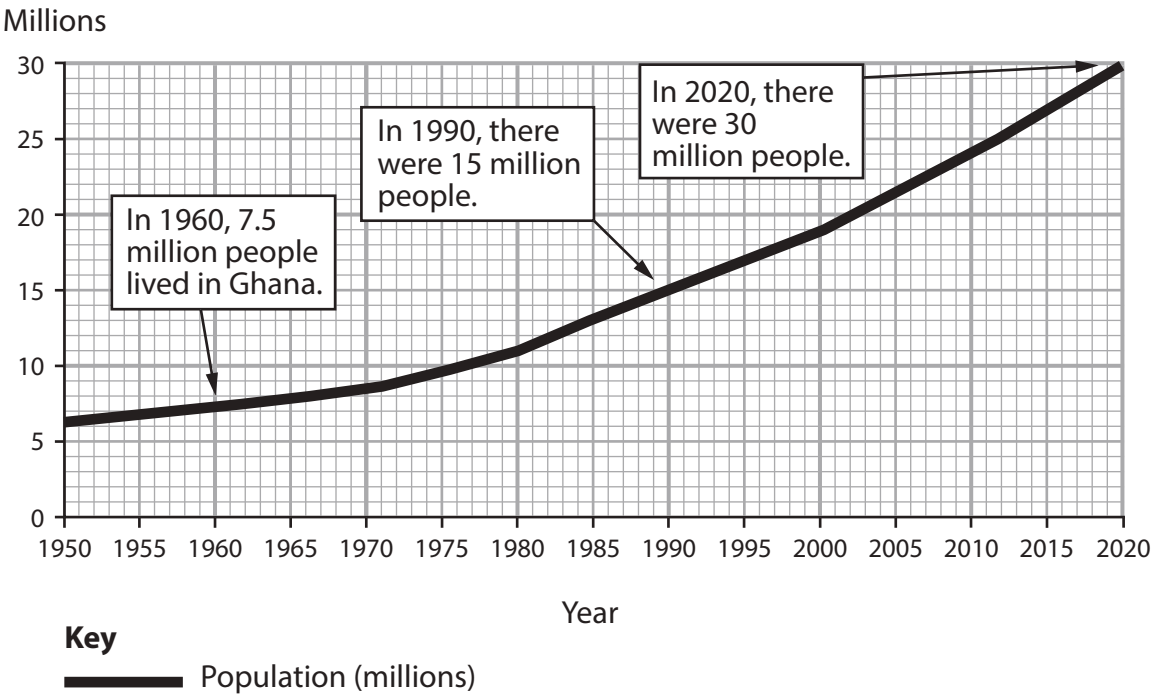
People and the Biosphere

The issue: **development choices for Ghana.**

- Ghana is a tropical West African country.
- Its main exports are oil, gold and cocoa (used to make chocolate).
- However, the country remains dependent on foreign aid.
- Ghana's government recently introduced a policy called 'Ghana beyond aid'. It wants Ghana's economy to grow more quickly – but how?

Introduction

- Ghana is a relatively poor country where around a quarter of children still don't complete secondary school.
- Ghana's tropical climate is suitable for cocoa production and this has led to the removal of much of Ghana's tropical rainforest. Nearly half of Ghana's people work in agriculture.
- Around 1 million people work in small gold mines. This industry is another major cause of deforestation. Ghana lost a larger percentage of its remaining rainforest than any other country in 2018.
- Ghana gained independence from the UK in 1957. Like then, much of today's profit from mining and agriculture still leaves Ghana. One view is that local people are exploited by transnational corporations (TNCs).
- Ghana's government has made developing new offshore oil resources its priority. The government says this will make people wealthier and less dependent on foreign aid.
- Two major development challenges lie ahead though. Firstly, population is predicted to nearly double between 2020 and 2050. Secondly, Ghana's physical environment is greatly threatened by climate change.



In 2020, the fertility rate for Ghana was approximately 4 children per woman. The fertility rate is the average number of children a woman gives birth to in her lifetime.

Figure 1

Population growth in Ghana, 1950–2020



Figure 2

Gold mining in Ghana

SECTION B

Forests Under Threat

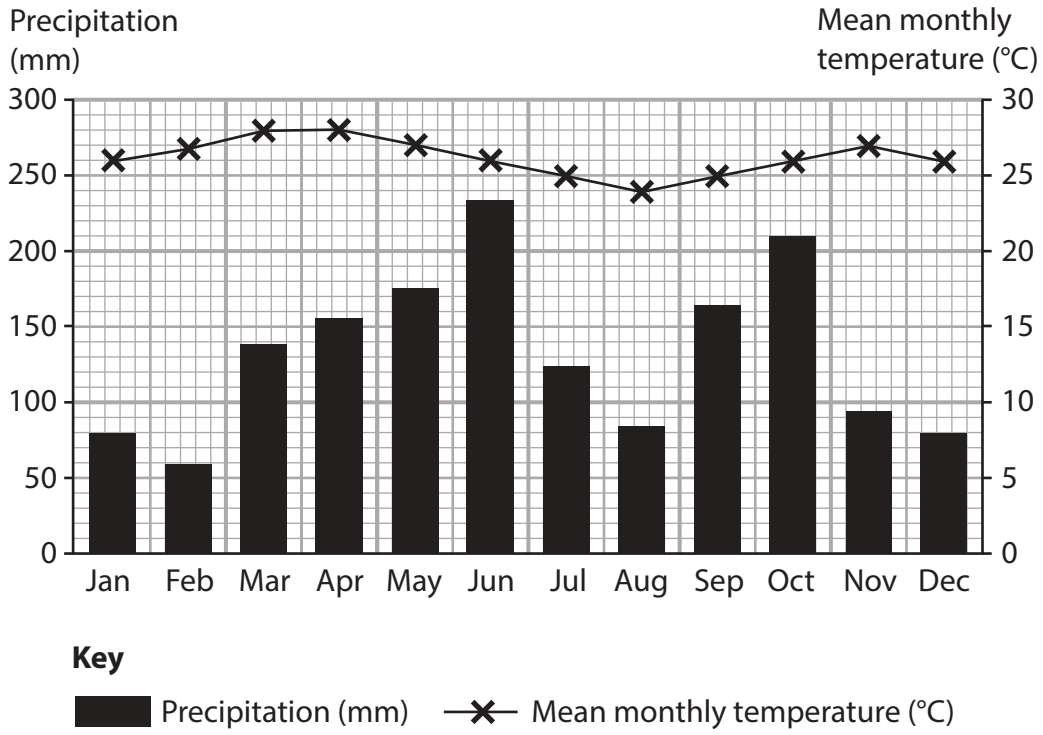
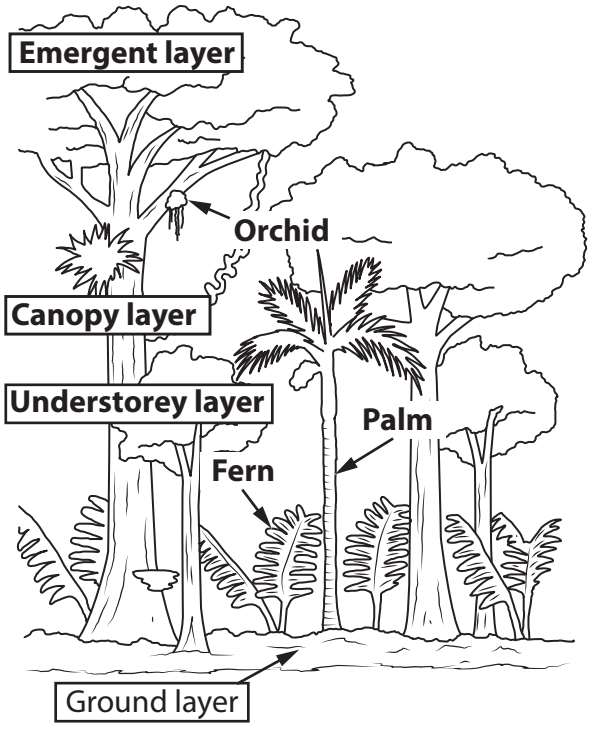


Figure 3

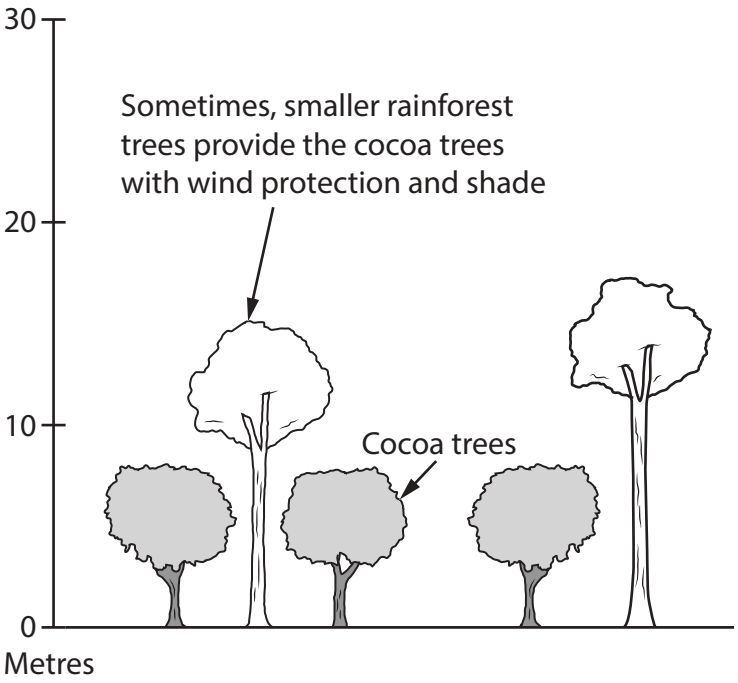
Climate graph for Ghana's tropical rainforest region

BEFORE



The structure of the tropical rainforest

AFTER



The structure of the cocoa plantation

Figure 4

Changes in vegetation resulting from cocoa production

SECTION C

Consuming Energy Resources

Ghana – a development profile		
Development indicators	**2010**	**2019**
Gross Domestic Product (GDP) per capita in US$	3,100	5,194
Human Development Index (HDI) ranking	152	140
% of 18 year olds attending university	7	17
Amount of international aid received in US$	1,697 million	1,256 million

The relative value of Ghana's different exports, 2019

- Each rectangle's size is proportional to the value of that economic sector.
- In 2020, the total economic value of Ghana's exports was US$ 21 billion.

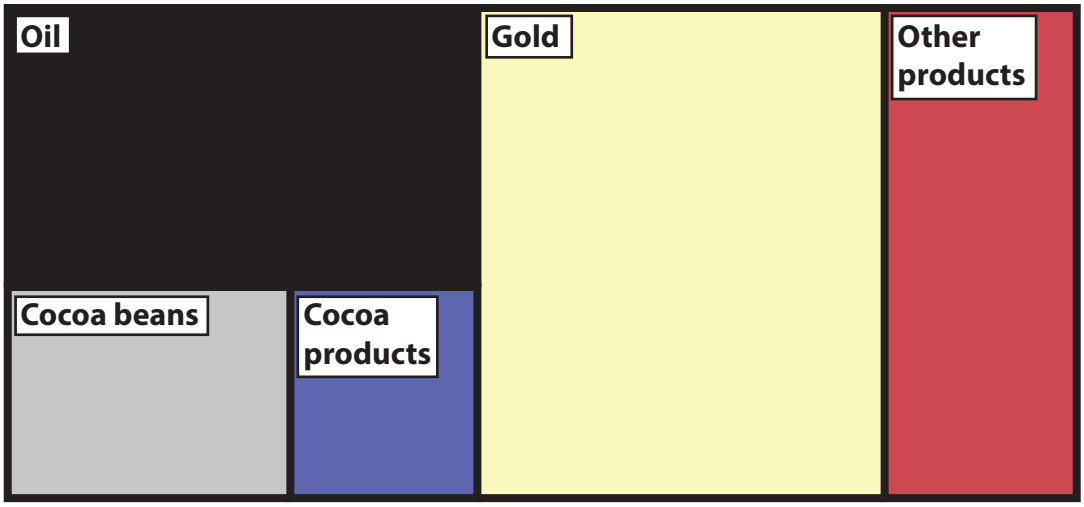


Figure 5

A development and economic profile of Ghana

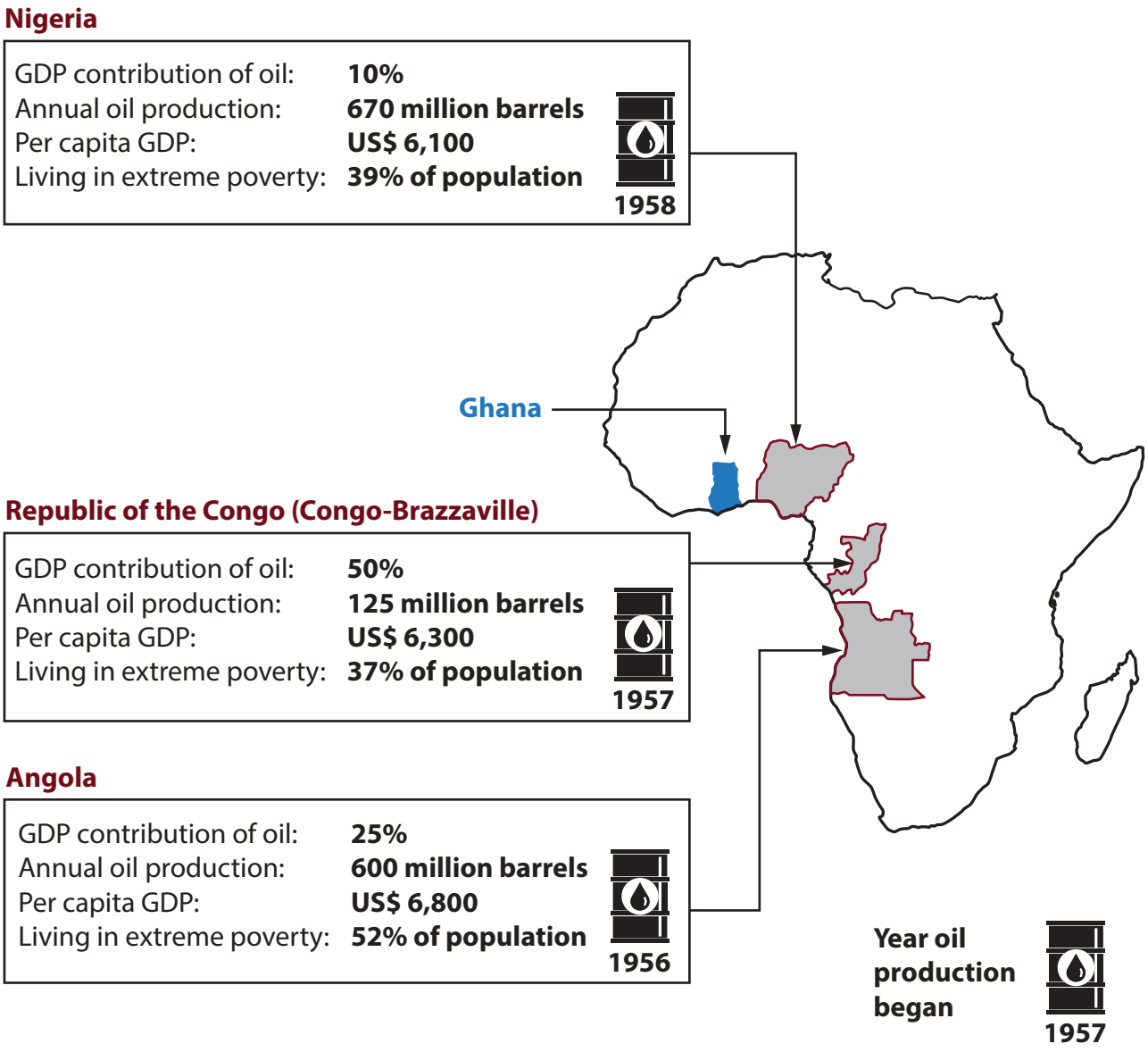
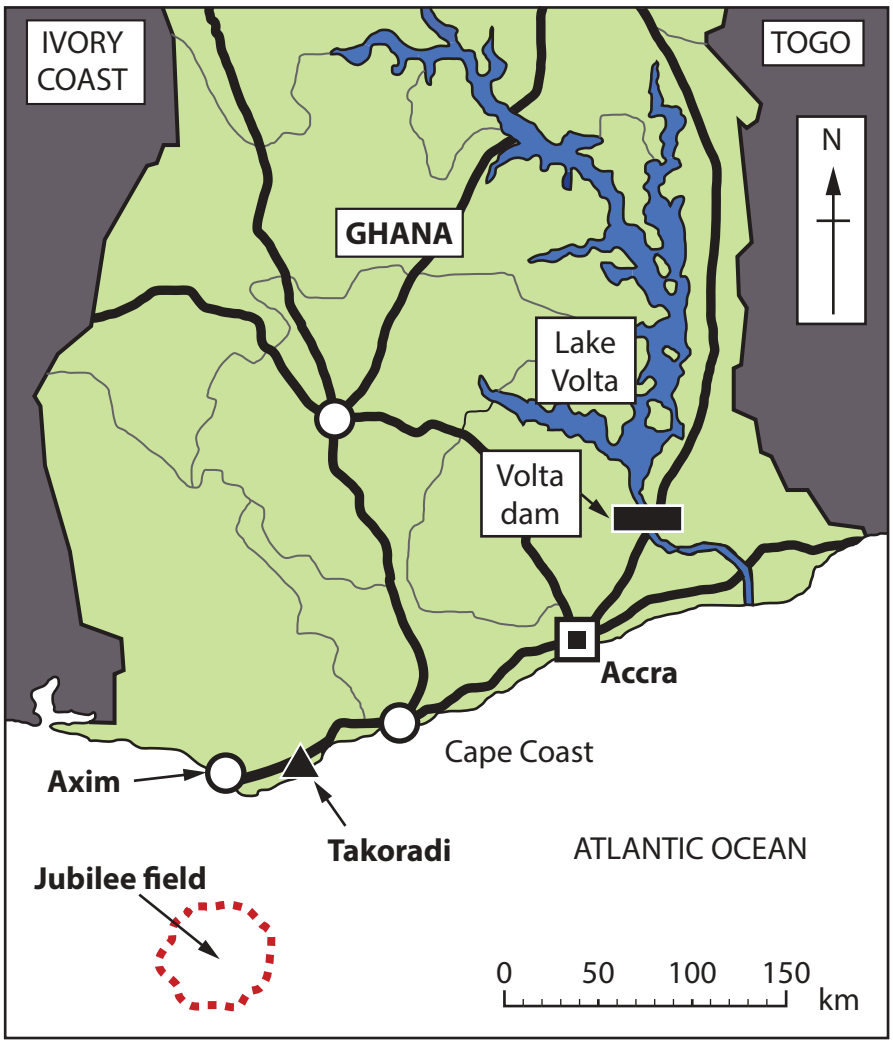


Figure 6

Africa's top three oil producers, 2020



Key

- Capital city
- City
- Roads
- Oil storage area
- Dam and hydroelectric power (HEP) station
- Oil field

In 2010, Ghana's government allowed a British TNC called Tullow to begin exploiting the newly-discovered Jubilee oil field.

Figure 7

Ghana's Jubilee oil field

View 1: A Ghanaian government minister

"Ghana is lucky. We only found oil recently, so we can learn from the mistakes of other countries where oil wealth has been a source of corruption and war. When I was young, we depended on cocoa exports. Today, everyone is talking about oil and freeing ourselves from foreign aid.

We still rely on foreign TNCs to provide the skilled workers and technology needed to develop our offshore oil. But this will change as our universities begin to offer management and engineering courses.

One day soon, Ghana will be a top African oil exporter with production of about 100 million barrels per year. We are excited about new offshore survey data produced by Kosmos (a US TNC). It shows we will become a very rich and successful country."

View 2: A Ghanaian university professor

"The vast majority of the profits from our natural resources do not remain here. Only 2% of gold profits make their way back. Oil is not much better. TNCs, aided by a few rich and powerful Ghanaians, keep most of the profits. Everyone else is left dependent on aid.

TNCs take 100 billion US$ each year from developing countries. Of the top 10 foreign TNCs operating in Africa, nine are based in developed countries. This is just a new version of colonialism.

In other words, wealth from our gold, cocoa and oil is used to promote economic growth elsewhere – while we stay too poor to pay for the infrastructure, education and skills needed to process and distribute our resources ourselves."

Figure 8

Two views on the exploitation of oil and other natural resources in Ghana

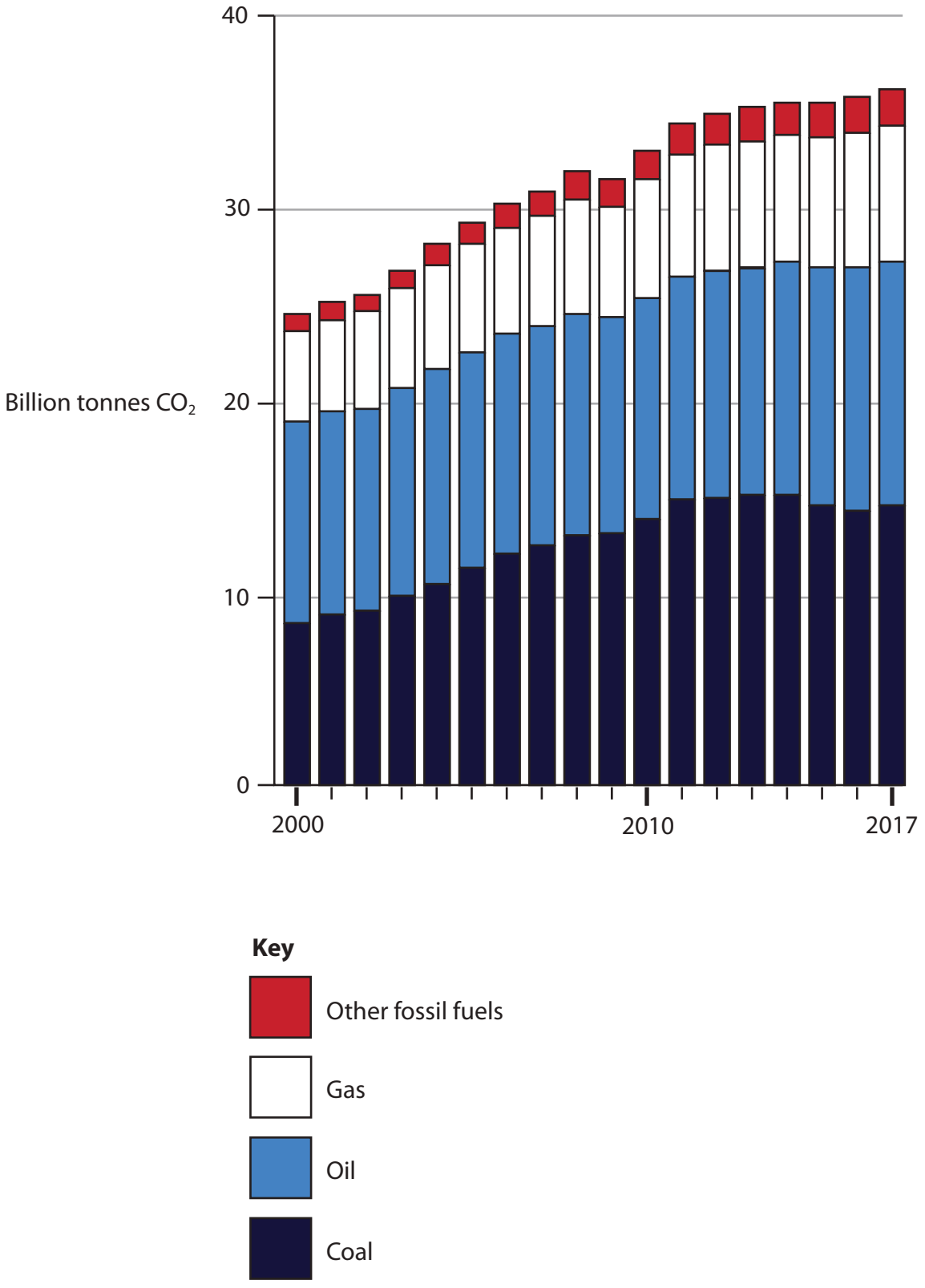


Figure 9

Global CO_2 emissions from fossil fuel use, 2000–2017

Climate change projections for Ghana

1.4–5.8°C increase in temperature by 2080

4 per cent (%) decrease in rainfall by 2040

75–190 mm rise in sea levels by 2100

Key future environmental issues for Ghana

Threatened ecosystems
- Forests replaced by grasslands with fewer animal habitats.
- Climate may become too dry for some existing crops.

Freshwater shortages
- Reduced water availability.
- Reduced water for HEP (hydroelectric power).

Flooded coastline
- Many of Ghana's urban areas will be flooded, where 2 million people live.
- Loss of farmlands near Lake Volta.

Warmer coastal waters
- Loss of species who prefer a colder habitat, so food webs may collapse.
- Loss of earnings for 2 million people who earn a living from fishing.

The longer 'business as usual' fossil fuel use continues, the worse these impacts will be.

Figure 10

Results of research by Ghana's climate change scientists

Acknowledgements
Pearson Education Ltd gratefully acknowledges all following sources used in preparation of this paper:
Figure 1 sourced from https://worldpopulationreview.com/countries/ghana-population
Figure 2 ©Greenshoots Communications/Alamy Stock Photo
Figure 5 sourced from https://oec.world/en/profile/country/gha/#Exports%20%20%20, https://wenr.wes.org/2019/04/education-in-ghana
Fig 6 sourced from https://www2.deloitte.com/us/en/insights/industry/oil-and-gas/africa-oil-gas-industry-energy-reserves.html
Fig 7 sourced from https://www.ft.com/content/b6c4d2c6-c1ad-11e8-84cd-9e601db069b8
Fig 8 view 1 adapted from https://www.ft.com/content/c10e6314-c1ad-11e8-84cd-9e601db069b8
Fig 8 view 2 adapted from https://www.salon.com/2019/05/25/98-3-percent-of-ghanas-gold-remains-in-the-hands-of-multinational-corporations_partner/
Fig 10 adapted from https://www.climatelinks.org/sites/default/files/asset/document/2017_USAID_Climate%20Change%20Risk%20Profile%20-%20Ghana.pdf

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June 2023

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In Geography (1GB0) Paper 3

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Mark
1(a)(i)	Tundra	Clerical (1)

Question Number	Answer	Mark
1(a)(ii)	C and E Rationale − these are main features of the distribution. A incorrect − the pattern is uneven B incorrect − trees are found away from the interior D incorrect − there is very little in the southeast; trees are mostly found in southwest and north	(2)

Question Number	Answer	Mark
1 (b)	Award 1 mark for any valid tropical or temperate forest biome. Many valid expressions exist, including: • Tropical / tropical rainforest / rainforest / tropical forest • Selva / equatorial forest • Deciduous / temperate / deciduous summer forest • Mangrove Accept any other valid terminology. Do not credit: • synonyms for taiga / boreal forest such as 'coniferous' • 'evergreen' • Amazon(ian) or other named regions • names of individual species ('oak forest' or 'birch wood')	Expert (1)

Question Number	Answer	Mark
1 (c)	In each case, award 1 mark for a basic suggested way based on the Figures, and 1 mark for further explanation, up to a maximum of 4 marks. Explanation may focus on specific ecosystems / biomes, or the distribution of ecosystems (plants/animals) in general. Explanation, including links between the different maps and photographs in Figures 1 and 2, may include: • Glaciers / ice / close to Arctic circle (1) where cold temperatures / lack of soil will limit vegetation growth (1) • Volcanoes (1) harm / destroys / prevent growth of ecosystems / plants (1) • Mountains / high altitude (1) where poor soils / low temperatures / permafrost limit growth / suit tundra (1) • Coastal edges / coastline (1) where warmer / milder / maritime climate suits forest ecosystems (1) • Snow-covered areas (1) are habitats for species with adaptations eg animals with white fur (1) Accept any other appropriate response Do not credit Statement of 'plate boundary' – must mention volcano, lava or other implied threat/hazard to ecosystems	Expert 2 + 2 (4)

Question Number	Answer	Mark
2(a)(i)	D Rationale – describes both flora and fauna richness. A incorrect – this is a rate of removal B incorrect – this is biome variation C incorrect – this is a chemical process	(1)

Question Number	Answer	Mark
2 (a)(ii)	In each case, award 1 mark for a basic reason based on Figure 3, and 1 mark for further explanation / development of why forest has not survived, up to maximum of 4 marks. Human reason • Deforestation by people / Vikings cut the trees (1) for fuel / timber / crops / agriculture (1) • People cleared forest for sheep (1) that require space / room for grazing / stopped trees from growing back / provide a food source (1) Physical reason • Strong winds / soil erosion (1) so tree roots lack soil / trees lack nutrients / fewer suitable habitats and so a reduced distribution (1) • Species died after climate change / ice age (1) because of changing / colder temperatures / they weren't suited / adapted to new conditions (1) Credit differing interpretations of 'human' and 'physical' (e.g. soil erosion can be framed as a 'human' reason caused by poor land management). Marking notes 'They cleared forest for sheep' without any development (using own knowledge – not more from Figure 3) is awarded 1 mark only because candidates are not adding own knowledge (it all comes directly from resource). Accept any other appropriate response(s) *based on Figure 3.*	Expert 2 2 (4)

Question Number	Answer	Mark
2(b)	Award 1 mark for a basic explanation of an economic benefit based on Figure 4 and 1 mark for further explanation, up to a maximum of 2 marks: • Forestry and timber work provides jobs (1) which can boost national economy / GDP / stimulate local multiplier effects (1) • Pine trees ruin landscape for tourists (1) which reduces income / revenues / visits (1) • Wood / timber sales / profits (1) are increased by fast-growing trees (1) Accept any other appropriate response based on Figure 4.	Expert (2)

Question Number	Answer	Mark
2 (c)	Award 1 mark for any valid adaptaion and 1 mark for the explanation, up to a maximum of 2 marks: • Evergreen / coniferous (1) due to short growing season / too little time for shedding and regrowth (1) • Needle leaves (1) to limit tranpiration / water loss / respiration / save energy (1) • Sloping branches / cone shaped tree (1) allowing snow to slip off (1) • Shallow roots (1) linked with frozen soil conditions (1) • Small / thin branches (1) that allow snow to fall off (1) Accept any other appropriate response. Do not credit • tall trees • characteristics that are not adaptations e.g. low biodiversity, nutrient store sizes	Expert
		(2)

Question Number	Answer	Mark
3 (a)(i)	Tourism	Clerical (1)

Question Number	Answer	Mark
3 (a)(ii)	Fishing and food / fishing / food	Clerical (1)

Question Number	Answer	Mark
3 (b)(i)	D Rationale − this is the percentile result for the simple operation 100 − (19 + 66 +2) A incorrect − there is no basis for this number B incorrect − this is 100 − (23 + 16) [column data] C incorrect − there is no basis for this number	(1)

Question Number	Answer	Mark
3 (b)(ii)	Award 1 mark for any of valid possible political causes of market / supply disruption. For example: • War / conflict (1) • Government (of oil producing country) raises prices (1) • Government mismanagement of economy (1) • Example of conflict e.g. Russian invasion of Ukraine, Gulf War, Arab-Israeli / Yom Kippur war (1) • Multi-lateral decision-making / OPEC policy (1) • Political mismanagement of markets (1) • Future carbon taxes might drive prices higher (1) Accept any other valid suggestion. Do not credit economic causes - unless it is implied that government / politicians / rulers may have played a role.	Expert (1)

Question Number	Answer	Mark
3 (c)	In each case, award 1 mark for a reason based on Figures 5 and 6, and 1 mark for further explanation, up to a maximum of 4 marks. Explanation should focus on why Iceland still needs a diverse energy mix / different energy sources. Possible reasons include: • Necessity of oil / fossil fuel / having oil in mix (1) as fishing fleets / aeroplanes need fossil fuel (1) • Using cheaper renewable energy for other things (1) e.g. heating homes (1) • Concerns with dependency on oil / volatile oil prices (1) so government strategy of developing renewables (1) • Not enough time has passed to phase out oil yet (1) because renewable energy are relatively new sources (1) Accept any other appropriate response.	Expert 2 + 2 (4)

Question Number	Answer	Mark
3 (d)	C 53 – 15 Rationale – correct range between upper & lower quartile A This is the entire range, not IQR B This is an entirely arbitrary operation D This is an entirely arbitrary operatio	(1)

Question Number	Answer	Mark
3 (e)	In each case, award 1 mark for a basic reason and 1 mark for further explanation or development, up to a maximum of 4 marks. One physical reason • Solar power uses sunlight (1) but some countries have weak sunlight / cloudy weather (1) • Wind power is created using turbines (1) but some countries lack suitable land for construction / lack coastlines for offshore turbines (1) • Many countries can't use geothermal energy sources (1) as they are away from tectonic plate boundaries (1) • Some countries lack water supply for HEP generation (1) for example some arid areas (1) • Climate is unreliable or changeable (1) which makes solar or wind unviable (1) • Plentiful fossil fuels are available instead (1) which therefore affects decision-making (1) One political reason • Government may not give permission for renewable projects (1) e.g. wind turbines that disturb the view (1) • Government will not subsidise renewable energy (1) as ir prefers to promote / rely on cheaper fossil fuels (1) • Governments may prioritise other things (1) e.g. tackling Covid / austerity / developing fracking / healthcare (1) • A government profits from oil sales (1) and has no incentive to develop renewables (1) Accept any other appropriate response.	Expert 2 + 2 (4)

3 (f)	AO3 (4 marks)/AO4 (4 marks) Answers should address environmental impacts profiled in Figure 8. The assessment may offer a view of which activity is most severe/concerning, and why. AO4 (skilled use of information from Figure 8) • Hot water at HGP brings sulphur and nitrogen gases to surface. • Breeding grounds lost for reindeer and geese, threatening biodiversity. • Some fish species have died out due to KHPS reservoir. • Health problems in Reykjavik can be traced back to HGP. • Three TNCs are producing aluminium at multiple sites thanks to renewable energy's low costs. • Aluminium is using electricity on a massive scale, requiring 3/4 of all electricity used in Iceland. A03 (making connections and /or arguments) • The *most serious* local human impacts are health problems in the capital city linked with pollution associated with the geothermal energy at HGP. • The *most serious* local environmental impacts are linked directly with species loss due to the KHPS reservoir. • HEP generation has meant that large areas of land and plant communities have been *entirely sacrificed* so that energy can be produced. • HEP (at KHPS) could be viewed as having a *worse impact* than HGP (geothermal). • However, the renewable energy has *little or no negative impact* on the climate especially geothermal power. • But renewable energy is the reason why aluminium TNCs have come to Iceland, and so is *indirectly responsible* for any harm done by heavy industry.

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question Number	Answer	Mark
3 (g) (i)	2014	Clerical (1)
Question Number	Answer	Mark
3 (g) (ii)	Award 1 mark for mention of: • ocean temperature (change/rise) • water temperature (change/rise) References to temperature change/rise must mention water/ocean for award of the mark.	Clerical (1)

3 (h)	AO3 (4 marks)/AO4 (4 marks) Answers should address the strengths and weaknesses of Iceland's plan as viewed by other countries and contexts. The assessment may offer an overview of how much value there is in adopting Iceland's plan for other countries given Iceland's unusual geographical context. AO4 (skilled use of information from Figure 10) • Iceland is promoting greater use of geothermal and HEP. • Iceland is part of EU and can participate in EU targets for industry. • Iceland can plant many more trees because it was originally a forested land and has a climate which supports taiga forest re-growth. • Iceland will ban petrol and diesel vehicles by 2030. • Iceland is developing carbon capture and storage technology. • Citizens in Iceland are helping collectively to bring about change A03 (making connections and /or arguments) • Afforestation is an effective way of reducing / offsetting carbon emissions which *many countries can potentially adopt*. • However, climate and land availability *may not support this approach* in some local/national geographical contexts. • Renewable energy targets and goals are something which *all countries* can usefully consider adopting. • However, *not all countries* have the same potential for renewable energy production, nor technology needed for carbon capture or vehicle replacements. • Energy efficiency and reduced consumption are strategies which individual citizens *in any context* can adopt as this hinges on personal behaviour. • One view might be that citizen-centred action, such as energy efficiency, is the *most useful* part of the plan because it has value in all local/national contexts.

Level	Mark	Descriptor
	0	No acceptable response
Level 1	1–3	Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Q	Indicative content
4	AO2 (4 marks) / AO3 (4 marks) / AO4 (4 marks) In order to fully justify a choice, the candidate must consider all three options and establish a clear argument. There is no preferred option. All options can be justified. Option 1 – Take action to reduce harmful impacts of aluminium production e.g. by imposing stricter controls and green taxes on polluting industries. Done first, this would bring clear immediate benefits to local areas where most damage has been done. However, deterring FDI might not be economically and socially sustainable. Option 2 – Increased replanting of trees to replace Iceland's lost taiga forest. This has local biodiversity benefits and a positive global dimension (mitigation) which ultimately helps everyone. Sustainability goals could also be met through limiting of soil erosion. Option 3 – Make new laws to remove fossil fuels from Iceland's energy mix. This helps protect the environment and provides new opportunities for renewable energy, and the investment and jobs it brings. However, some sectors will suffer if this is done. A02 (applied understanding) • Transnational corporations (TNCs) are footloose and may avoid contexts where costs increase (option 1) and profits are reduced. • Stricter environmental standards (option 1) help address both the environmental and social strands of sustainable development, but may adversely affect GDP. • Re-forestation / re-wilding (option 2) restores habitats and contributes towards local biodiversity. • Re-forestation (option 2) provides ecosystem services by protecting the soil from run-off and erosion as part of water cycle movement. • Electricity can be decarbonized more easily than transport sector, because fossil fuels (option 3) are needed for vehicles (cars, shipping, aircraft) • Climate change mitigation requires that fossil fuel use (option 3) is phased out sooner rather than later, in line with global agreements e.g. Paris Agreement. A03 (use of argument) • Sustainability has social, economic and environmental strands which complicates the evaluation of all three options. • Moreover, there are short-term and longer-term futures to consider. Removing fossil fuels could create short term economic and social hardship for fishing communities. • Stricter controls on industry could benefit the environment but at the cost of investment and jobs, making it a less sustainable pathway for Iceland's people. • Replanting trees may create forestry jobs, reduce soil erosion and hopefully tourism will not be significantly harmed by the changes – offering the best 'all-round' future. • Iceland is a physically isolated country whose economy might be threatened by reduced global business connections resulting from green taxes. • Any climate change mitigation by Iceland will have little impact at a global scale due to its relatively tiny population/size, so the best option will have clear local benefits. AO4 (use of evidence) • Forest re-growth may be impossible because so much soil has been lost (Figure 3). • Forest re-growth may threaten tourist industry by changing the landscape if around 3 million trees are planted (Figure 4). • 47,000 tourism and industry jobs need to be protected, e.g. in Reykjavik (Figure 5). • Fossil fuels are still vital for tourism and transport (Introduction and Figure 6). • Even if industry goes elsewhere, the damage is already done at KHPS (Figure 8). • Climate threats to Iceland's environment and economy (fishing industry) are too great to be ignored (Figures 9 and 10).

Level	Mark	Descriptor
	0	• No acceptable response
Level 1	1–4	• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)
Level 2	5–8	• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	Marks	Descriptor
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance:* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

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Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Friday 16 June 2023

Afternoon (Time: 1 hour 30 minutes)

Paper reference **1GB0/03**

Geography B

PAPER 3: People and Environmental Issues Making Geographical Decisions

You must have:
Resource Booklet (enclosed)
Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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SECTION A

People and the Biosphere

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Use Section A (pages 2, 3 and 4) in the Resource Booklet to answer this question.

(a) Study Figure 1.

(i) Name the ecosystem which covers the largest area of land in Figure 1.

(1)

.....

(ii) Identify **two** statements which correctly describe the past distribution of forest on the map in Figure 1.

(2)

☒ **A** The forest was fairly evenly distributed

☒ **B** Forests grew mainly in central areas of Iceland

☒ **C** Forests grew mainly near the edges of the land

☒ **D** More forest was in the south-east of Iceland

☒ **E** More forest was in the south-west of Iceland

(b) Using your own knowledge, name **one** forest biome that is **not** present in Iceland.

(1)

.....

DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA

(c) Using evidence from Figures 1 and 2, suggest **two** ways in which Iceland's physical geography influences the distribution of its ecosystems.

(4)

1 .....

.....

.....

.....

2 .....

.....

.....

.....

(Total for Question 1 = 8 marks)

TOTAL FOR SECTION A = 8 MARKS

DO NOT WRITE IN THIS AREA
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SECTION B

Forests Under Threat

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

2 Use Section B (page 5) in the Resource Booklet to answer this question.

(a) Study Figure 3.

(i) Which **one** of the following is the best definition of biodiversity?

(1)

☒ **A** The percentage of forest which has been removed

☒ **B** The different forests found in a country

☒ **C** The rate of nutrient cycling in an ecosystem

☒ **D** The number of plant and animal species

(ii) Using Figure 3 and your own knowledge, explain **one human** reason and **one physical** reason why very little of Iceland's forest remains.

(4)

Human reason

Physical reason

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(b) Study Figure 4.

Using Figure 4 and your own knowledge, explain **one** possible impact of replanting forests on Iceland's economy.

(2)

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(c) Using your own knowledge, explain **one** way in which trees in the taiga biome are adapted to the climate.

(2)

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(Total for Question 2 = 9 marks)

TOTAL FOR SECTION B = 9 MARKS

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SECTION C

Consuming Energy Resources

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

3 Use Section C (pages 6 to 10) in the Resource Booklet to answer this question.

(a) Study Figure 5.

(i) Identify the sector which employs most people.

(1)

.....

(ii) Identify the sector which is **most clearly** shown as being threatened by climate change.

(1)

.....

(b) Study Figure 6.

(i) Calculate the value of **X** in the table.

(1)

☒ **A** 78

☒ **B** 61

☒ **C** 19

☒ **D** 13

(ii) Using your own knowledge, state **one** possible **political** cause of a large global oil price increase.

(1)

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(c) A country's 'energy mix' is the range of different energy sources used by its people and industries.

Using evidence from Figures 5 and 6, explain **two** reasons why the people of Iceland need a diverse energy mix.

(4)

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(d) Study Figure 7.

Identify the interquartile range of the data.

(1)

- ☒ **A** 76 – 7
- ☒ **B** 75 – 17
- ☒ **C** 53 – 15
- ☒ **D** 33 – 16

(e) Using your own knowledge, explain **one physical** and **one political** reason why some countries produce little renewable energy.

(4)

Physical reason

Political reason

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(f) Study Figure 8.

Using evidence from Figure 8, assess the **environmental** impacts of renewable energy use in Iceland.

(8)

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(g) Study Figure 9.

(i) Identify the year when Iceland's annual average temperature was highest.

(1)

.....

(ii) Using Figure 9, identify **one** reason why climate change leads to the loss of Arctic fish species.

(1)

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(h) Study Figure 10.

Assess the value of Iceland's Climate Action Plan as a strategy that **other countries** could also use.

(8)

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(Total for Question 3 = 31 marks)

TOTAL FOR SECTION C = 31 MARKS

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SECTION D

Making a Geographical Decision

Answer Question 4. Write your answers in the space provided.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and your use of specialist terminology.

4 Study the three options below for Iceland's government to manage the country's natural environment and resources more sustainably.

Option 1: Make new laws to limit the harm done by aluminium production.

Option 2: Increased planting of new trees to replace Iceland's lost taiga forest.

Option 3: Take action to reduce fossil fuel use by transport in Iceland.

Select the option you think Iceland's government ought to focus on **first**.

Justify your choice.

Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course to support your answer.

(12)

Chosen option

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(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 4 = 16 marks)

TOTAL FOR SECTION D = 16 MARKS
TOTAL FOR PAPER = 64 MARKS

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Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Friday 16 June 2023

Afternoon (Time: 1 hour 30 minutes)

Paper reference **1GB0/03**

Geography B

PAPER 3: People and Environmental Issues
Making Geographical Decisions

Resource Booklet

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SECTION A

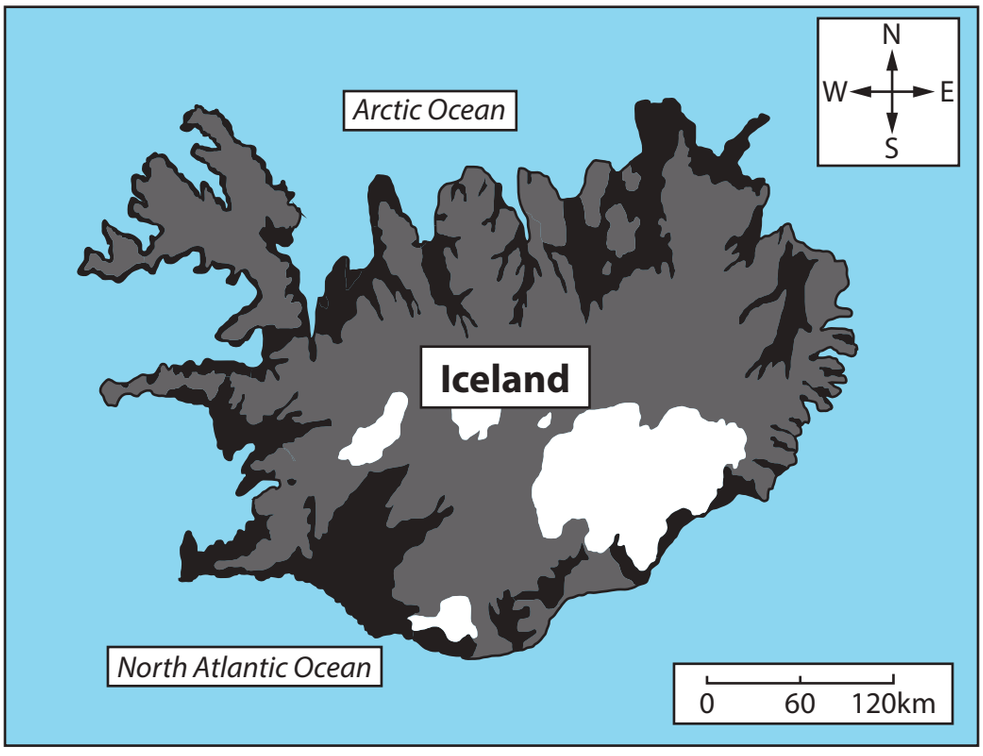
People and the Biosphere

The issue: **a sustainable future for Iceland**.

- The European country of Iceland is a volcanic island in the North Atlantic Ocean. Large areas of Iceland are an uninhabited wilderness.
- In 2019, Iceland's 350,000 citizens had an average life expectancy of 84 and a very high Gross Domestic Product (GDP) per capita of 55,000 US$.
- Environmental impacts of Iceland's past economic growth include deforestation, soil erosion and pollution. The environment is now threatened by climate change.
- How can Iceland's government ensure a sustainable future not only for its people but also for Iceland's physical environment?

Introduction

- Iceland lies on a boundary between two tectonic plates. Volcanic activity has created a dramatic mountainous landscape which attracts tourists. Glaciers cover many of the island's high mountains and volcanoes.
- This environment provides plentiful renewable energy. Firstly, seasonal meltwater from glacial ice is used to create hydroelectric power (HEP). Secondly, volcanic activity generates ground heat that can be a power source – this is called geothermal energy.
- Some transnational corporations (TNCs) have been attracted to Iceland by its cheap electricity. These TNCs make aluminium and provide jobs but also have an environmental and climate impact.
- Carbon dioxide is also produced by Iceland's many large fishing boats and the tourist aeroplanes on which its economy depends.
- The carbon footprint of Iceland's citizens is one of the world's largest. An Icelandic politician recently admitted: "If everybody lived like Icelanders, we would need six planets."



Key

Tundra

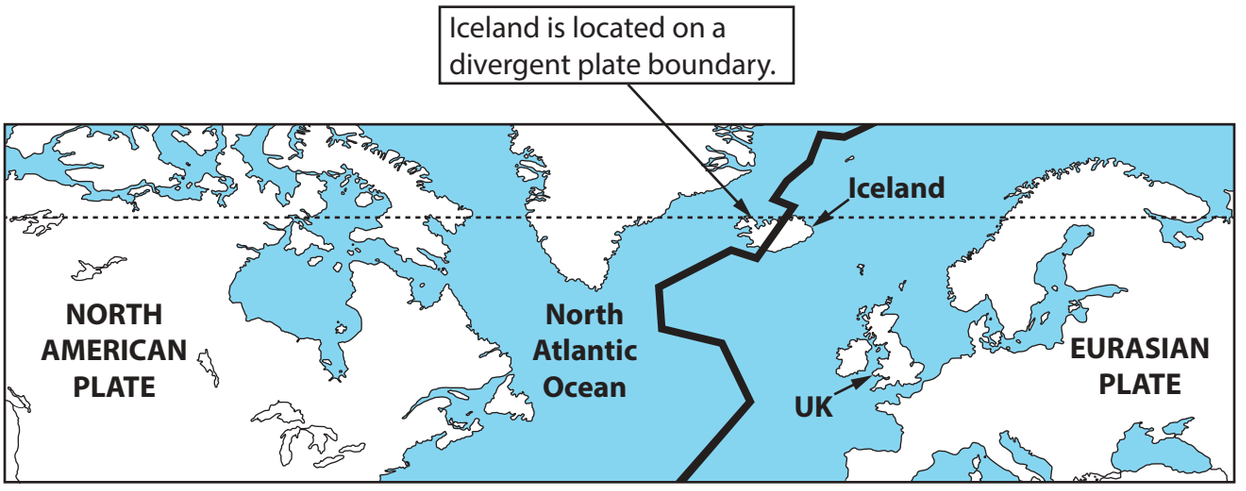
Glaciers

Taiga forest

- Parts of Iceland were originally covered with a type of taiga (boreal) forest composed of birch, pine, and spruce trees.
- 1,100 years ago, when humans first sailed to Iceland from mainland Europe, around 25 per cent (%) of Iceland was still forested. Tundra vegetation or glaciers covered other areas.

Figure 1

Iceland's ecosystems before humans first arrived 1,100 years ago



Key

Mid-Atlantic Ridge (a tectonic plate boundary)

Arctic Circle



Some highland areas in central Iceland are covered with ice.



Iceland is an active volcanic hotspot.

Figure 2

The location and physical geography of Iceland

SECTION B

Forests Under Threat

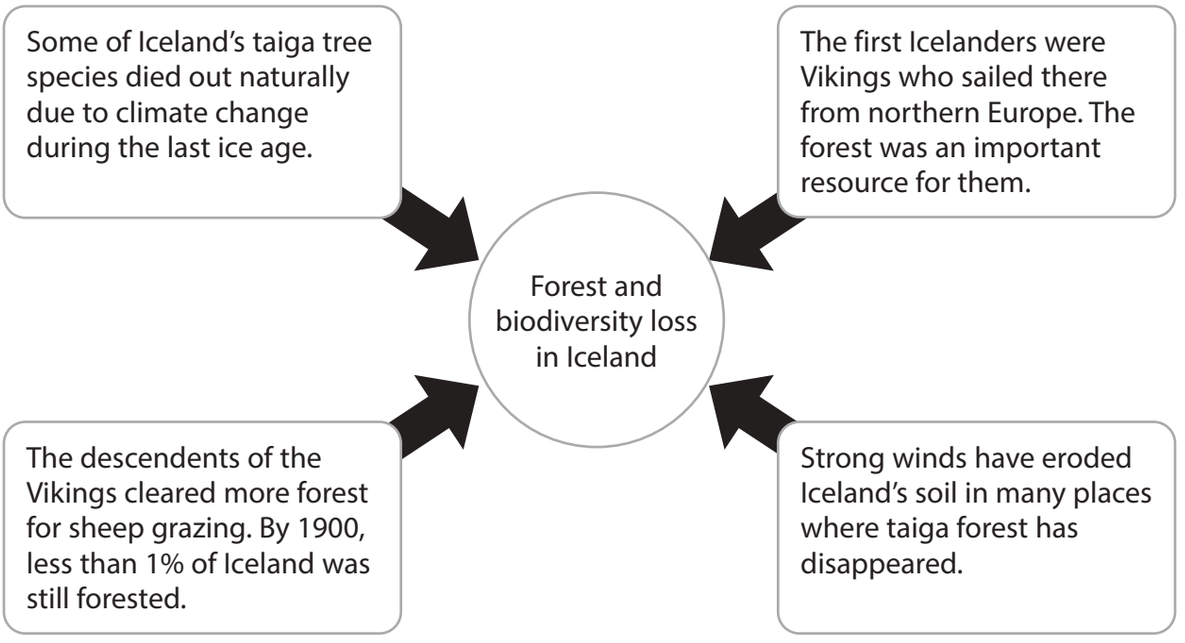


Figure 3

Causes of forest and biodiversity loss in Iceland

Economic benefits	Environmental benefits	Social benefits
• Wood production • Forestry work	• Biodiversity gains • Soil protection • Carbon storage	• Recreation • Flood risk reduction

- Iceland's government plans to replant half of Iceland's lost taiga forest by 2100. 3 million fast-growing pine trees are planted each year.
- Not everyone supports forest replanting because it changes the landscape that international tourists want to see. New forest can create many benefits though.

Figure 4

Replanting Iceland's forest

SECTION C

Consuming Energy Resources

Sector	% of Iceland's earnings	Characteristics of sector (2018 data)	Threats to sector
Fishing & food	27	• 5,000 people work on fishing vessels. • 20,000 people work in food processing or support roles like ship repairs.	• Marine ecosystem health is threatened by rising ocean temperatures. • Some species may vanish altogether.
Tourism	33	• 27,000 people work in air travel, hotels, coaches and visitor attractions. • 3 million tourists visited in 2018.	• Almost all tourists arrive by air. • Volcanic eruptions and major global events can affect air travel.
Aluminium manufacturing	36	• 4,000 people work in aluminium metal production. • The factories are mainly owned by foreign TNCs.	• TNCs might relocate elsewhere if costs in Iceland rise. • Demand is linked to global economic growth.



Figure 5

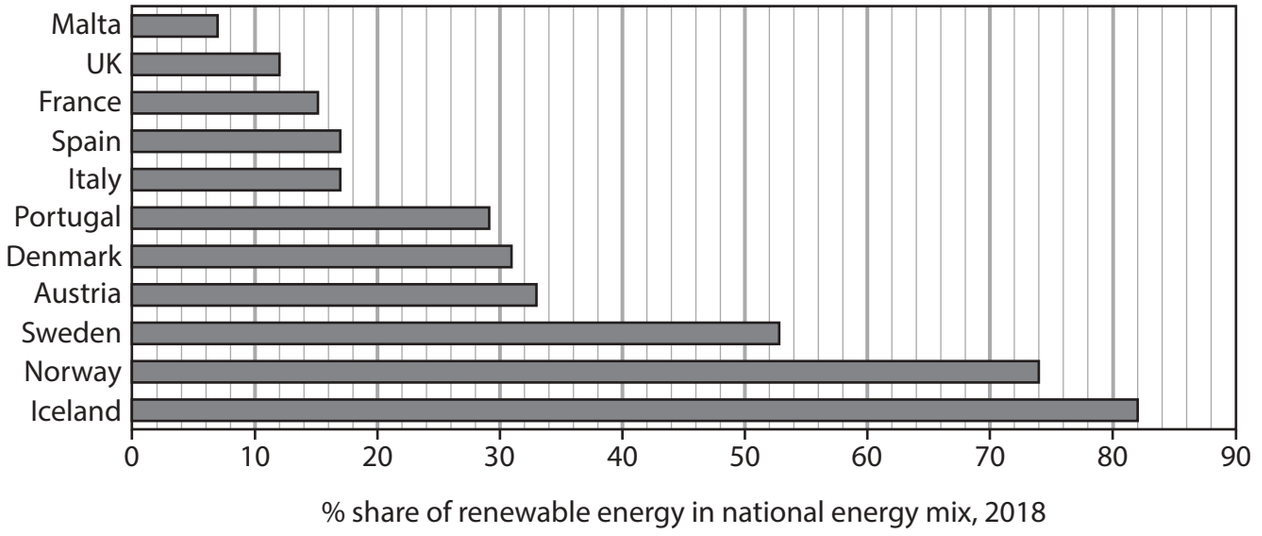
Information about Iceland's three main economic sectors and its capital city, Reykjavik

	% contribution to Iceland's energy mix			
YEAR	Hydroelectric power	Geothermal energy	Imported oil	Imported coal
2005	18	56	23	3
2010	19	66	X	2
2018	20	62	16	2

- A country's 'energy mix' is the range of different energy sources that are used.
- Fossil fuel use for making electricity has fallen as renewable energy sources have increased. However, oil is still needed for shipping, aeroplanes and road vehicles.
- Renewable energy was developed rapidly in the 1970s when Iceland could not afford to import the oil it needed because of a large global price increase.
- Hydroelectric power (HEP) was developed by building large dams and reservoirs.
- Geothermal energy was developed by drilling into rock and drawing up hot water. Electricity can be generated using steam from this water. 90% of Icelandic houses are now heated using geothermal energy.

Figure 6

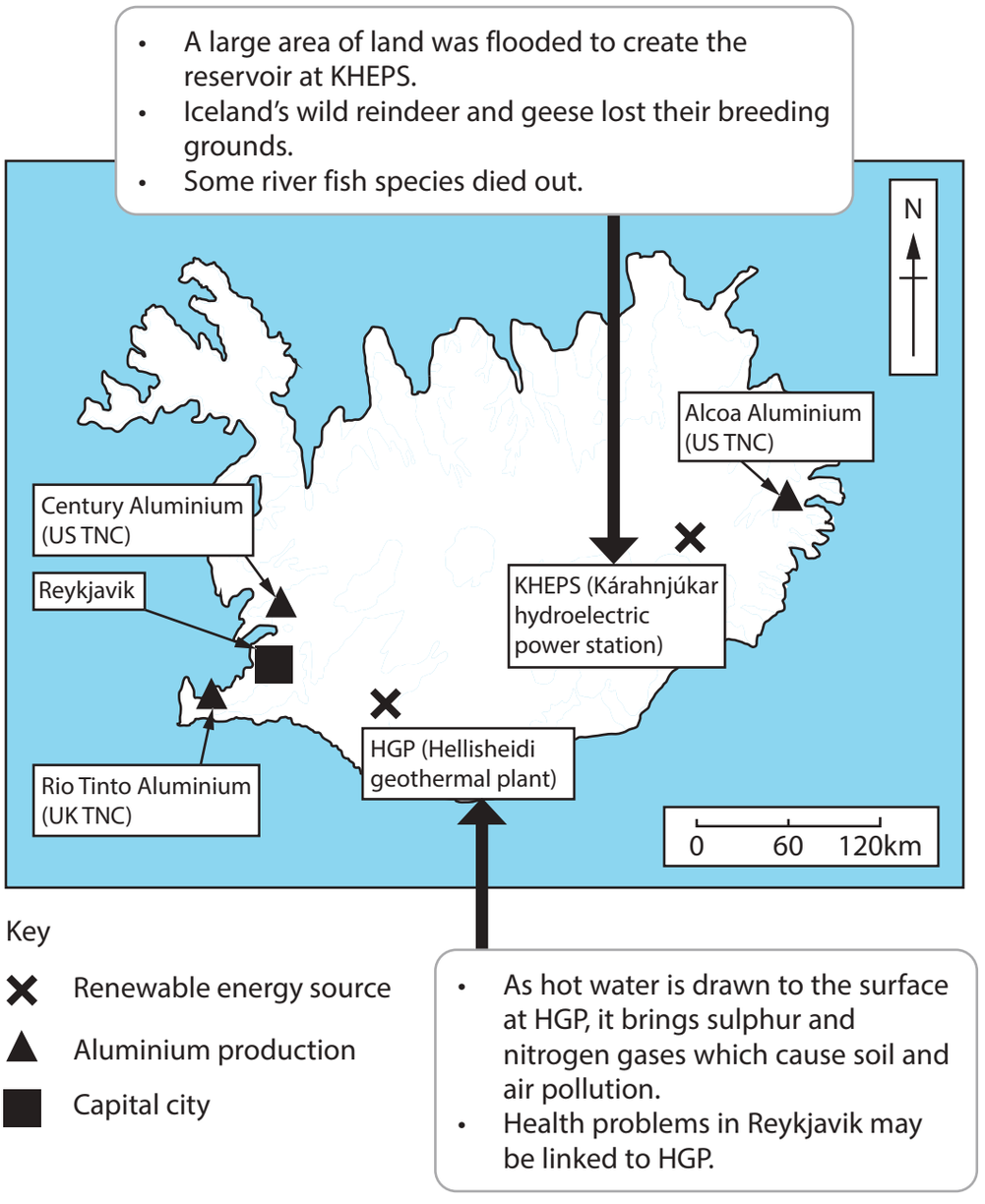
An energy profile of Iceland



The United Nations has described Iceland's use of renewable energy as:
"A model for the world."

Figure 7

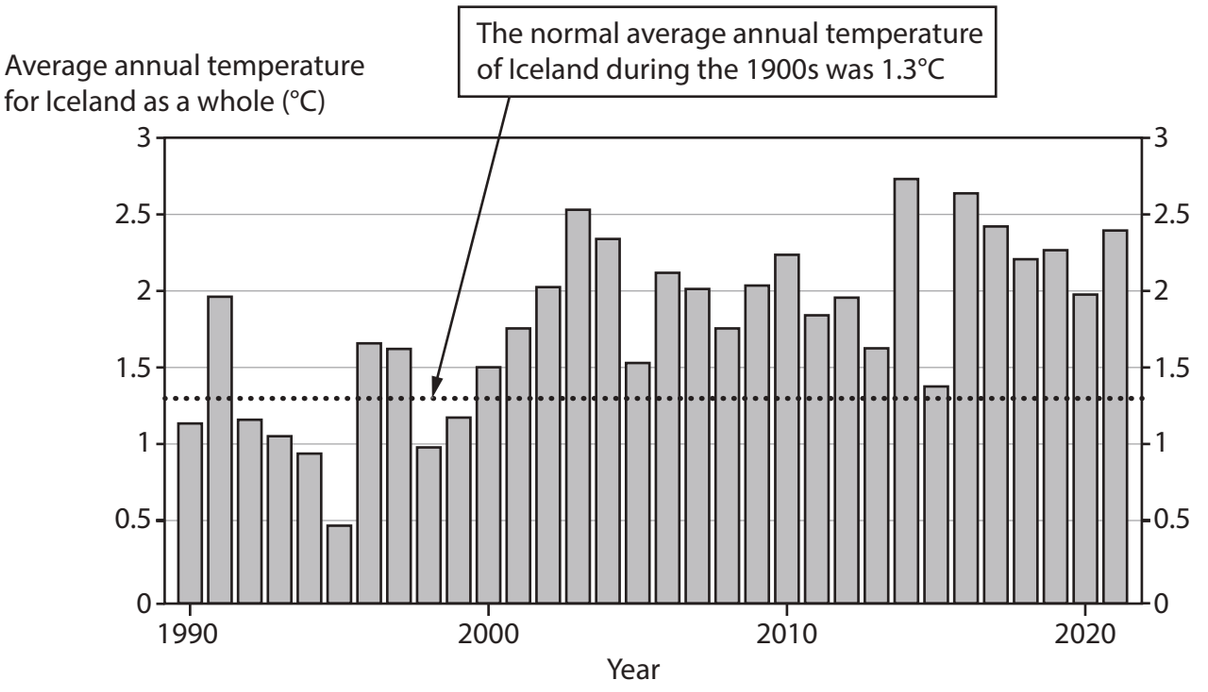
Renewable energy use by selected European countries, 2018



- TNCs produce aluminium at coastal sites close to power stations. Rocks containing a mineral called bauxite are shipped to Iceland where they are processed to make aluminium. Three-quarters of all Iceland's electricity is used in this process.
- Aluminium is Iceland's most valuable export. It is used to make cars, aeroplanes and phones. Very few countries produce more aluminium than Iceland.
- The TNCs are attracted by low taxes and low energy prices set by Iceland's government.

Figure 8

Information about renewable energy and aluminium production in Iceland



- Climate change is causing the temperature to rise even faster in Arctic areas than in many other parts of the world.
- Changes in ocean water temperature mean that Arctic fish species such as cod may vanish due to habitat loss.

Figure 9

Temperature rises in Iceland and other Arctic regions, 1990–2021

		Category	Climate Action Plan goals
1		Roads & shipping	• Reduce emissions from road traffic by 20% and from shipping by 40%. • Ban new petrol and diesel vehicles after 2030.
2		Aircraft & industry	• Join global efforts to reduce aircraft emissions. • Develop carbon capture and storage (CCS) technology. • Reduce emissions by 43% in line with European Union (EU) targets.
3		Energy production	• Promote and support renewable energy. • Reduce emissions from energy production by 43%. • Encourage citizens to conserve energy.
4		Forestry & land use	• Replanting enough new taiga trees to increase carbon storage by 500%.
Although Iceland's overall emissions have fallen by one-third since 1970, the average carbon footprint size of an Icelandic citizen remains almost double that of a UK citizen. As a result, new Climate Action Plan goals for 2030 have been introduced.			

Figure 10

New Climate Action Plan goals introduced by Iceland's government in 2020

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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all the following sources used in the preparation of this paper:

Figure 1 adapted from https://www.cbd.int/doc/world/is/is-nr-01-en.pdf

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Figure 5 © Christopher Kane/Shutterstock

Figure 7 based on: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Share_of_energy_from_renewable_sources_2018_infograph.jpg

Figure 8 adapted from: https://www.savingiceland.org/2017/08/icelands-troubled-environment/

Figure 9 adapted from: https://tradingeconomics.com/iceland/temperature

Figure 10 adapted from https://www.government.is/library/01-Ministries/Ministry-for-The-Environment/201004%20Umhverfisraduneytid%20Adgerdaaaetlun%20EN%20V2.pdf