OCR
Oxford Cambridge and RSA

GCSE (9–1) Physical Education

J587/01 Physical factors affecting performance

Wednesday 16 May 2018 – Morning

Time allowed: 1 hour

First name									
Last name									
Centre number						Candidate number				

INSTRUCTIONS

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the barcodes.

INFORMATION

- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in the question marked with an asterisk (*****).
- This document consists of **16** pages.

© OCR 2018 [601/8442/5]
DC (NF/SG) 152374/4
OCR is an exempt Charity

Section A

Answer all the questions.

1 Describe the function of alveoli.

.....

.....

.....

..... **[2]**

2 **Fig. 1** below shows a diagram of the heart.

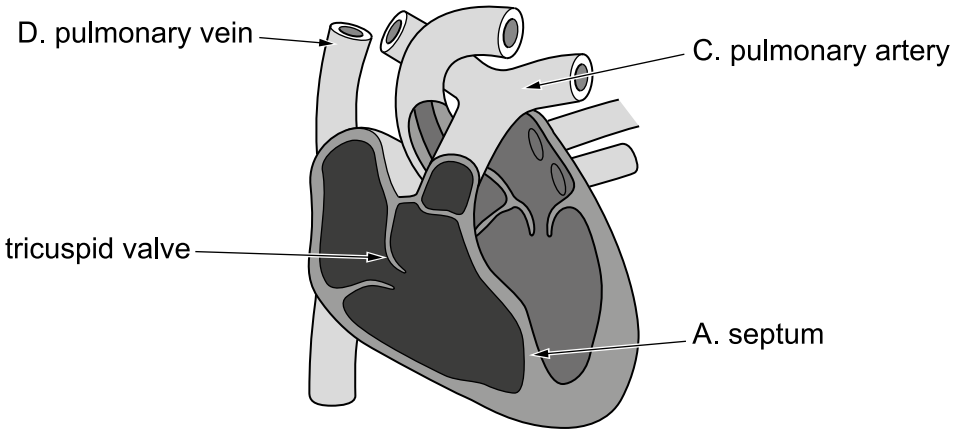


Fig. 1

Identify the part of the heart that is labelled incorrectly in **Fig. 1**.

..... **[1]**

3 Give a definition of a synovial joint.

..... **[1]**

4 A rugby player will use their shoulder joint when making a tackle.

Name the **two** articulating bones in the shoulder joint that are at risk of injury during a rugby tackle.

1. .....

2. .....

[2]

© OCR 2018

5 Reversibility is a principle of training.

Using a practical example, explain what is meant by the term 'reversibility'.

.....

.....

.....

..... **[2]**

6 Which **one** of the following shows the correct distances for the multi-stage fitness test and the test for speed?

Put a tick (✓) in the box next to the correct answer.

A 30 m for the multi-stage fitness and 25 m for the speed test ☐

B 20 m for the multi-stage fitness and 25 yards for the speed test ☐

C 20 m for the multi-stage fitness and 30 m for the speed test ☐

D 30 m for the multi-stage fitness and 30 yards for the speed test ☐

[1]

7 **Fig. 2** shows a diagram of the lower leg.

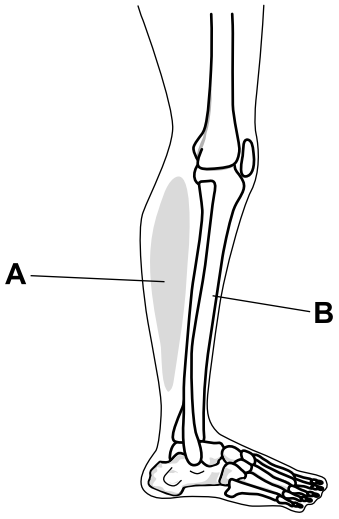


Fig. 2

Identify muscle **A** and bone **B**.

(i) Muscle **A**: ..... **[1]**

(ii) Bone **B**: ..... **[1]**

© OCR 2018

8 Identify **two** potential hazards in a swimming pool.

1. .....

2. .....

[2]

9 Using practical examples, explain the difference between the transverse and longitudinal axes of rotation.

.....

.....

.....

.....

.....

..... **[3]**

10 Give a practical example where aerobic endurance is important in sport.

..... **[1]**

11 **(a)** Circuit training is a training method that consists of a series of exercise stations.

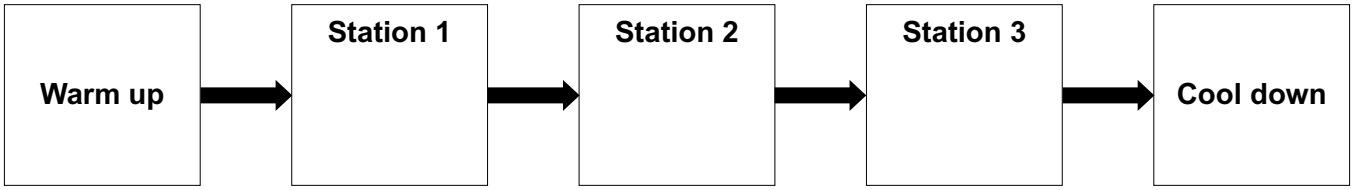
Describe **one** other feature of circuit training.

.....

..... **[1]**

(b) Design a simple circuit training session to overload the upper body by completing the diagram below, placing one of the named exercises in each station.

Bicep curls	Lunges	Squats	Press ups	Pull ups	Step ups



[1]

© OCR 2018

12 Cartilage plays an important role in the skeletal system.

Assess how cartilage helps a marathon runner during performance.

.....

.....

.....

..... **[2]**

13 Which class of lever will a weightlifter be using when performing a bicep curl?

..... **[1]**

14 The performer in **Fig. 3** below has performed a movement that has passed through the frontal plane.

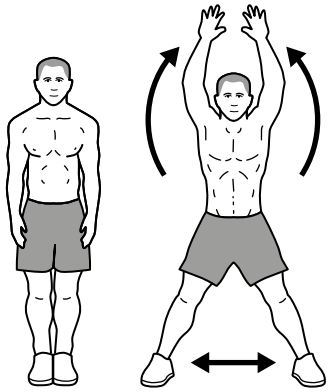


Fig. 3

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

15 Which one of the following statements is false?

Put a tick (✓) in the box next to the correct answer.

A Fixators help stabilise a joint and prevent unnecessary movement ☐

B Most lever systems in the body are 3rd class ☐

C A common hazard in rugby is concussion ☐

D Fartlek training improves speed and endurance ☐

[1]

© OCR 2018

16 **Fig. 4** shows a diagram that highlights one plane of movement.

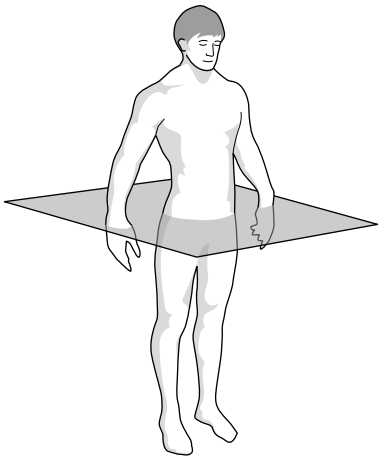


Fig. 4

Name the movement plane highlighted in **Fig. 4** above.

..... **[1]**

17 Describe a suitable cool down for a dancer.

.....

.....

.....

..... **[2]**

18 Give a practical example of how an appropriate level of competition can prevent injury to a performer in a sport or physical activity.

.....

..... **[1]**

© OCR 2018

19 **Fig. 5** shows a picture of the foot of a long jumper taking off.

Label Arrows A and B to correctly identify the components of this lever system.

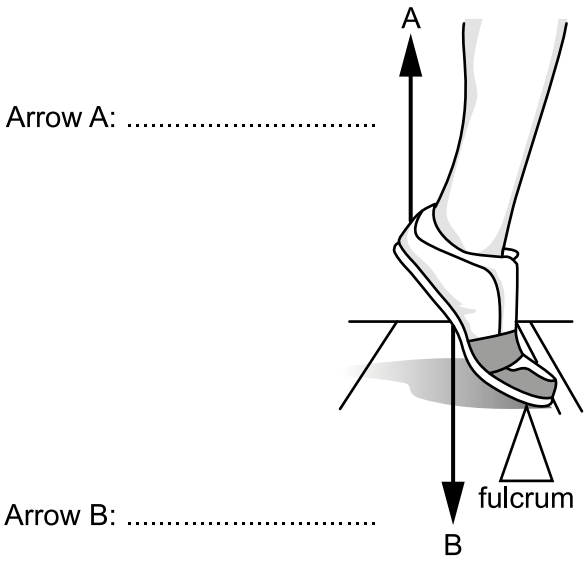


Fig. 5

[1]

20 The human heart is part of a single-circulatory system.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

© OCR 2018

Section B

Answer all the questions.

21 **(a)** Explain the short term effects on the heart and the blood of a swimmer performing a 100 m front crawl.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[5]**

(b) A swimmer who undergoes a six month training programme will experience muscular hypertrophy.

(i) What is meant by the term 'muscular hypertrophy'?

.....

..... **[1]**

(ii) Describe other muscular benefits the six month training programme might have for the swimmer.

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2018

22 (a) Reaction time and speed are important fitness components required for a 100 m sprinter.

Define the fitness components of reaction time and speed and explain their importance to a 100 m sprinter.

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2018

(b)* Before an athlete participates in a sprint they will complete a warm up to prepare their body and mind for the race.

Using practical examples, describe the components of a warm up and evaluate the different mental preparation techniques that could be used to fully prepare the athlete for the race.

.... **[6]**

© OCR 2018

23 **Fig. 6** below shows the respiratory rate for two hockey players before, during and after a match.

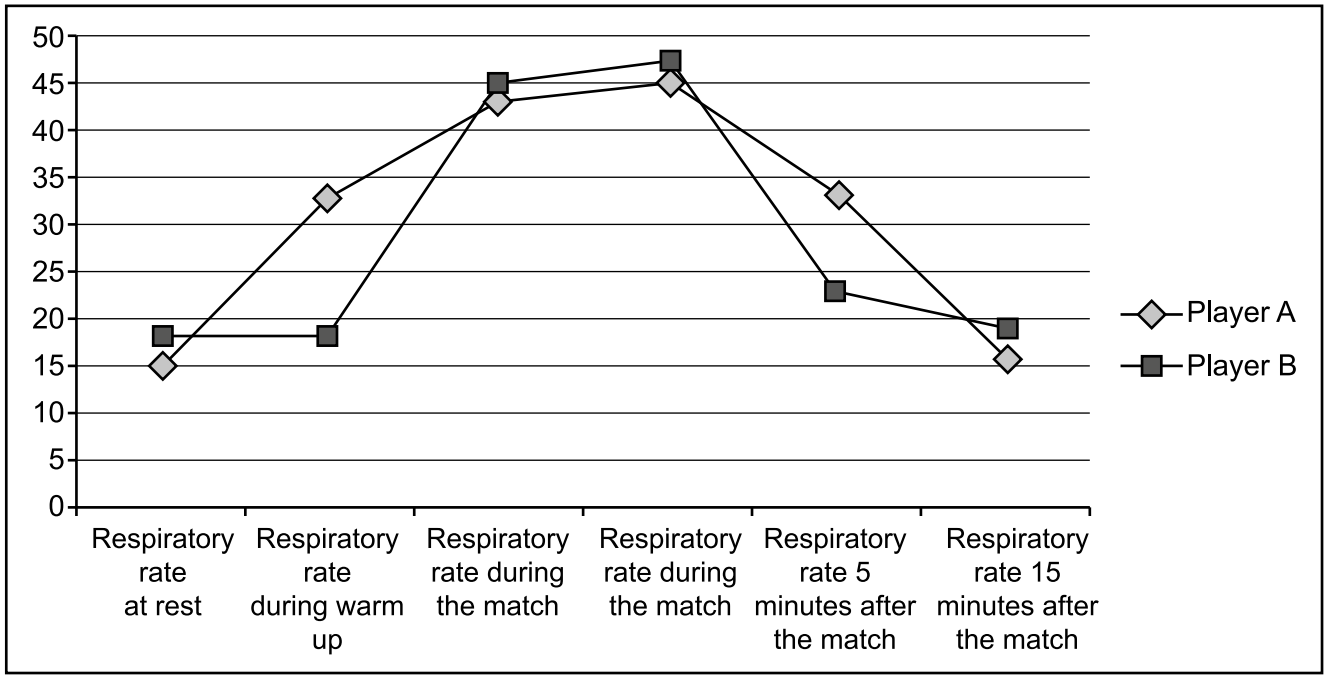


Fig. 6

(a) Using the information in **Fig. 6**, analyse how the two players' respiratory rates compare and why they may be different.

.....

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

© OCR 2018

(b) Explain the role of respiratory muscles during inspiration while player A is performing in the hockey match.

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

(c) Analyse the effects that lactic acid could have on the performance and recovery of the hockey players.

.....

.....

.....

.....

.....

..... **[3]**

END OF QUESTION PAPER

© OCR 2018

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2018

© OCR 2018

© OCR 2018

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© OCR 2018

OCR
Oxford Cambridge and RSA

GCSE

Physical Education (9–1)

Unit **J587/01:** Physical factors affecting performance

General Certificate of Secondary Education

Mark Scheme for June 2018

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not–for–profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2018

Annotations used in the detailed Mark Scheme

Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO1 on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached

Available but <u>not</u> used: 'BP' (blank page) – 'SEEN' is used

- **KU, EG** and **DEV** used <u>instead</u> of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.

- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			Two from two of: 1. Allows gaseous exchange/diffusion 2. Allows oxygen to diffuse/move into the blood/capillaries 3. Allows carbon dioxide to diffuse/move from the blood/capillaries	**2** 2 x (AO1)	Pts 2 and 3 require direction of gas to be correct Into lungs/alveoli is TV Oxygen diffusion into blood is 2 marks (pt. 1 and 2)
2			**D** or pulmonary vein **OR** vena cava (is incorrectly labeled)	**1** 1 x (AO1)	
3			One mark for: 1. Freely moveable/allow for movement	**1** 1 x (AO1)	
4			Two from two of: 1. Humerus 2. Scapula	**2** 2 x (AO2)	Mark first 2 responses only Accept: phonetic spellings
5			Two from two of: 1. (Explanation) – Any performance/fitness gain that has occurred through training can be lost once training has stopped **OR** training must be maintained to prevent loss of performance/fitness 2. (Example) – appropriate practical example demonstrating reversibility	**2** 1 x (AO1) 1 x (AO2)	Do not accept: any reference to physical adaptations/gains are **reversed** (in question) Go back to where they were = TV If practical example is correct, as in pt 2, and shows explanation through e.g. then award 2 marks e.g A weightlifter will lose their strength gained (1 x AO2) if they have been unable to lift weights for a while (1 x AO1) (due to injury)
6			**C.** 20m for the multi-stage fitness and 30m for the speed test	**1** 1 x (AO1)	
7			Two from two of: Muscle A - Gastrocnemius Bone B - Tibia	**2** 2 x (AO1)	Accept phonetic spellings for each Do not accept: tibula or fibia for B or calf or shin

Section A					
Question			**Answer**	**Marks**	**Guidance**
8			Two marks for two of: 1. Slippery/hard/wet/damaged surface (in or around the pool) 2. Loose fittings **OR** equipment left out 3. **Too much** chlorine/chemicals in pool 4. Overcrowded pool 5. (Ability/behaviour of) other swimmers 6. Depth of water/deep/shallow 7. Dirty water/poor water quality/litter/debris/waste	**2** 2 x (AO1)	Mark first 2 responses only Do not accept: consequences of hazard e.g. slipping/falling/drowning/collisions Water/chlorine on its own = TV
9			Three from three of: 1. Transverse is side to side/hip to hip/left to right **and** longitudinal is top to bottom/head to toe 2. (transverse) e.g. somersault/biceps curl/pedalling a bicycle 3. (longitudinal)e.g. pirouette/full turn/flat spin/twirl	**3** 3 x (AO3)	Accept: diagram if both axes are correct for 1 Do not accept: front to back (for transverse) Transverse is movement in sagittal plane (flexion/extension) and longitudinal is movement in transverse plane
10			One mark from: 1. (activity) any activity/event that requires aerobic energy production e.g. marathon/triathlon/800m+ 2. (time) To achieve a faster time in an (mainly aerobic) event/activity 3. (performance) Remain effective during a game/less fatigue during performance	**1** 1 x (AO2)	Running/cycling/swimming on its own = TV Long distance run/swim/cycle = BOD Do not accept a named performer e.g. Mo Farah

Section A					
Question			**Answer**	**Marks**	**Guidance**
11	**(a)**		One mark for: 1. Main/specific/different **<u>muscles</u>** (targeted at each station) **OR** involves repetition (reps) of exercises **OR** body weight is usually the resistance **OR** each station is timed **OR** rest period between each station	**2** 1 x (AO1)	Train different parts of the body = TV Intense exercise followed by not as intense = TV Rest at the end = TV
	(b)		Accept any combination that includes at least 2 arm exercises (bicep curls, pull ups, press ups)	1 x (AO2)	
12			Two from two of: 1. Protects the knees/bones **OR** prevents friction **OR** prevents bones rubbing/knocking together **OR** prevent wear and tear 2. Acts a shock absorber/absorbs impact (of running) 3. Provides support /stability 4. Provides (some) flexibility 5. Aids mobility/movement at the joint 6. Helps to connect some bones (at cartilaginous joints) 7. Keeps airways open	**2** 2 x (AO3)	Look for a description rather than single word lists
13			3rd class lever	**1** 1 x (AO3)	Accept: 3 on its own
14			True	**1** 1 x (AO3)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
15			C. A common hazard in rugby is concussion	**1** 1 x (AO1)	
16			Transverse (plane)	**1** 1 x (AO1)	
17			Two from two of: 1. Jogging/whole body exercise/low intensity movements/slow dance 2. Stretching	**2** 2 x (AO1)	N.B. Exercises may be in either order
18			One mark for: 1. Age/gender/weight/ranking/grading/skill/ability level Examples - Boxing occurs in weight categories – e.g. you won't have a heavyweight boxer fighting against a light boxer Football – less likely to be injured in a tackle if all participants same/similar age	**1** 1 x (AO2)	Level of competition must be linked to a practical example
19			A= Effort **and** B = Load	**1** 1 x (AO2)	N.B. 1 mark so only 1 tick Accept: Resistance for **B** = BOD
20			False	**1** 1 x (AO1)	

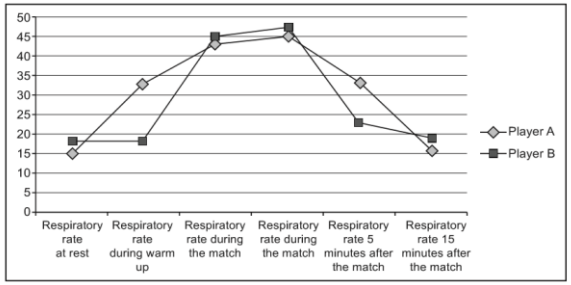
Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**		5 marks for 5 of: 1. Increase in heart rate/HR 2. Increase in stroke volume/SV 3. Increase in cardiac output/Q 4. **Increases** blood flow/oxygen to (working) muscles 5. directs blood away from other organs **OR less** blood to other organs 6. Increase in blood pressure due to the increase in demand for oxygen (from the working muscles) 7. **Increase** in **blood** lactate/lactic acid/CO_2 because muscles are working 8. Blood temperature increases to help control of body temperature 9. Vascular shunt **OR** vasodilation of blood vessels to muscles **OR** vasoconstriction of blood vessels to other organs	**5** 5 x (AO2)	Do not accept: long-term adaptations e.g. stronger heart Pt 4 - Blood flows to muscles = TV as need **more/increase** More blood to arms/legs = BOD pt. 4 Lactic acid builds up in muscles – TV Lactic acid produced – TV LA found in the blood – TV
	(b)	**(i)**	1 mark for: (Muscular hypertrophy) – muscle will increase in size/mass/growth	**5** 1 x (AO1)	Do not accept: Hypertrophy of muscle (in question)

Section B					
Question			**Answer**	**Marks**	**Guidance**
		(ii)	4 marks for 4 of: 1. Increase in power/strength (including tendon strength) 2. Increase in speed 3. Increase in (muscular) endurance **OR** increased resistance to fatigue **OR** go for longer 4. Increase in flexibility/range of movement/less chance of injury 5. Increase tolerance to lactic acid **OR** higher/delayed anaerobic threshold 6. Increased rate of removal of lactic acid 7. Increased/reduced/quicker recovery rate 8. Increased capillarisation **at the muscles**	4 x (AO1)	Muscles become faster = TV The performer becomes quicker = BOD LA to be removed = TV
22	**(a)**		1 mark for: Reaction time: The length of time it takes a performer to respond to a stimulus **OR** the time between the onset of the stimulus and the initiation of the response / movement 1 mark for: Importance: (The quicker the sprinter can respond/react to the gun) the quicker they will get away from the blocks **OR** have an advantage over their opponents 1 mark for: Speed: The ability to move quickly **OR** distance divided by time **OR** rate of change of position with respect to time	**4** 2 x (AO1) 2 x (AO2)	Do not accept “react” in definition of reaction time. Must use an equivalent word e.g. respond/move. But OK to use “react” in example Look for the **importance** of the fitness component to a **sprinter** in examples, or sprinting is implied. Need to react quickly to the gun is TV. **It does not explain the importance.**

Section B					
Question			Answer	Marks	Guidance
			1 mark for: Importance: (The quicker they are able to move their body/legs/run) the greater the chance of winning the race/getting a faster time		
22 (b)*			**Level 3 (5–6 marks)** • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. **Level 2 (3–4 marks)** • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. **Level 1 (1–2 marks)**	**6** 2 x (AO1) 2 x (AO2) 2 x (AO3)	**Level 3 Discriminators** • AO1, AO2 and AO3 are well covered. • Detailed understanding of most components of a warm up, with clear examples of suitable exercises linked to a sprinter. • Good knowledge of mental preparation techniques with some evaluation of their benefits • There may be some imbalance between the two parts of the question for 5 marks. • At 6 marks, both aspects are well addressed with some specific evaluation of at least 2 mental preparation techniques **Level 2 Discriminators** • Some success at more developed AO2 and/or AO3 points • Good understanding of some components of a warm up, with some examples of suitable exercises • Some knowledge of mental preparation techniques is shown at the top of L2 **Level 1 Discriminators** • Responses demonstrate basic AO1 or AO2 knowledge and understanding • A limited description that may include an example of one or two components of a warm up

Section B			
Question	**Answer**	**Marks**	**Guidance**
	• basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. <u>Components</u> 1. Pulse raiser - any exercise that increases heart rate • Jogging on the spot/light jogging 2. Mobility – any exercise that takes joint through full range of movement • Arm swings/hip circles/ankle rotations 3. Dynamic – any exercise that involves change of speed and direction • Shuttle runs/agility runs 4. Stretching – any exercise that increases range of movement/ reduces risk of injury • Static stretches – e.g. hamstrings stretch, etc. • Dynamic stretches – e.g. lunges 5. Skill Rehearsal – any exercise that prepares performer for the race by replicating elements of the race • Short 10m sprints/practice their starting technique		• Little or no attempt to identify mental preparation techniques **(0 marks)** • No response or no response worthy of credit. **Question:** *Using practical examples, describe the components of a warm up and evaluate the different mental preparation techniques that could be used to fully prepare the athlete for the race.* **Annotations:** **Use KU for numbered points = AO1** **Use EG for examples related to sprinting = AO2** **Use DEV for evaluations of mental preparation techniques = AO3** **Use SEEN for examples not applied to sprinter** **N.B. General evaluations about mental preparation techniques are valid but some evaluation specific to the technique(s) is needed to achieve top of level 3**

Section B			
Question	**Answer**	**Marks**	**Guidance**
	Mental Preparation Techniques 6. Imagery • Heightens or controls arousal levels (AO3) • E.g. The athlete using imagery to keep calm/get in the zone before the race 7. Mental rehearsal • Allows effective / clear / safe decision making (AO3) • E.g. The athlete visualises the sprint start • Both imagery/mental rehearsal can speed up reactions (AO3) 8. Selective attention • improves concentration/focus or blocks out distractions (AO3) • e.g. An athlete uses selective attention to concentrate on the upcoming race 9. Positive thinking • Increases motivation/confidence/self-awareness (AO3) • E.g. The athlete believes they are going to win/qualify for the race **or** telling themselves they are going to have a good start from the blocks 10. (General evaluations of mental preparation) (AO3) • Heightens/controls arousal • Improves decision-making • Speeds up reactions • Improves focus/concentration or blocks out distractions • Increases confidence/motivation/self-awareness		

Section B					
Question			**Answer**	**Marks**	**Guidance**
23	**(a)**		Three marks for 3 of: 1. A has a lower resting respiratory rate **or** B has higher resting respiratory rate 2. A may be fitter (than B) **or** B may be less fit than A 3. A does a warm up **or** B does not do a warm up 4. A may not be working as hard as B **or** B working harder than A 5. Suitable reference to different playing positions for A **and** B, e.g. player A may be in defence while B may be a midfield player 6. A does a cool down **or** B does not do a cool down 7. Both players have (almost) returned to resting respiratory rates after 15 minutes	**3** 3 x (AO3)	 Points 2 – 4 do not need reference to A and B e.g. B does not do a warm up = ✓ Do not accept: A is fit on its own = TV
	(b)		Four marks for 4 of: 1. (External) intercostals contract 2. Diaphragm contracts/flattens 3. This pulls or moves the rib cage up/out 4. Increasing the volume of the thoracic cavity/thorax/lungs 5. Decreasing the pressure within thoracic cavity/thorax/lungs **or** pressure within thoracic cavity is less than atmospheric pressure	**4** 2 x (AO1) 2 x (AO2)	N.B. If during expiration contraction of respiratory muscles = X Do not accept: More space in lungs = TV Decrease in pressure on its own = TV

Section B					
Question			Answer	Marks	Guidance
	(c)		(Performance) (sub-max 2 marks) 1. Causes fatigue in the **muscles** 2. Causes pain/discomfort/soreness/aches 3. resulting in decrease in performance 4. Player A's warm up may mean less lactic acid build up (Recovery) (sub-max 2 marks) 5. Recovery will be longer if more lactic acid has built up **OR** slows down recovery rate 6. lactic acid causes HR/BR to stay higher than normal	**3** 3 x (AO3)	N.B. Sub-max 2 for points about effect of lactic acid on performance and recovery Do not accept: cramp

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Oxford Cambridge and RSA Examinations
is a Company Limited by Guarantee
Registered in England
Registered Office; The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA
Registered Company Number: 3484466
OCR is an exempt Charity

OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553

© OCR 2018

OCR
Oxford Cambridge and RSA

GCSE (9–1) Physical Education

J587/02 Socio-cultural issues and sports psychology

Friday 18 May 2018 – Afternoon

Time allowed: 1 hour

First name	
Last name	
Centre number	
Candidate number	

INSTRUCTIONS

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the barcodes.

INFORMATION

- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in the question marked with an asterisk (*).
- This document consists of **16** pages.

© OCR 2018 [601/8442/5]
DC (LK/SG) 152373/4
OCR is an exempt Charity

Section A

Answer all the questions.

1 Identify **one** effect that beta blockers may have on a performer in sport which could aid their performance.

..... **[1]**

2 Give **two** ways in which gender might affect participation in physical activity and sport.

1. .....

2. .....

[2]

3 **(a)** Identify **one** reason for deviance in sport.

..... **[1]**

(b) Give **two** different practical examples of gamesmanship using a different sport for each one.

1. .....

.....

2. .....

.....

[2]

4 Which **one** of the following is the best strategy to improve participation in physical activity and sport with higher quality provision?
Put a tick (✓) in the box next to the correct answer.

A UK sport providing financial support to elite athletes ☐

B The Lawn Tennis Association part funding the Wimbledon Championships ☐

C A local authority building outdoor basketball facilities ☐

D The private sector increasing the number of personal trainers ☐

[1]

© OCR 2018

5 What is meant by commercialisation in sport?

.....

..... **[1]**

6 Identify **one** type of social media that influences the commercialisation of sport.

..... **[1]**

7 Complete the following statement using numbers and words from the box below.

Participation in sport from the age of ..... to 24 has decreased since 2005 and approximately

..... percent participate in sport for at least 30 minutes ..... a week.

12	50	twice	once	30	16

[3]

8 Give **two** mental preparation techniques a sports performer might use to prepare themselves before competition.

1. .....

2. ..... **[2]**

9 Give **one** practical example of a sports skill that is classified as an open skill on the environmental continuum.

..... **[1]**

10 Define the term 'motor skills' and give an example of 'pre-determination' as a characteristic of a skilful performer.

Definition: .....

.....

Example: .....

.....

[2]

© OCR 2018

11 Which **one** of the following is the best practical example showing knowledge of performance as a type of feedback?
Put a tick (✓) in the box next to the correct answer.

A A tennis player finding out from his coach how many first serves he completed successfully during a tournament ☐

B A rugby player knowing that she has played well because the crowd cheered her throughout the match ☐

C An athlete receiving the result of a photo-finish after a 100 metre race during an athletics competition ☐

D A netball player being told by her team-mate that her shooting technique was incorrect in a previous match ☐

[1]

12 Is this statement true or false? Draw a circle around your answer.

A sprint start off the blocks in a 100 metre race is an example of a simple skill.

True **False**

[1]

13 Describe **one** advantage and **one** disadvantage of using mechanical guidance in the learning of a motor skill.

Advantage: .....

.....

.....

.....

Disadvantage: .....

.....

.....

.....

[2]

14 Give a practical example of manual guidance being used to improve a motor skill in sport.

..... **[1]**

© OCR 2018

15 Which **one** of the following is the best example of a meal that is high in fibre?
Put a tick (✓) in the box next to the correct answer.

A A hard-boiled egg with white bread and butter ☐

B A baked jacket potato with baked beans ☐

C Fried steak with French fries ☐

D Grilled sausage with mashed potatoes ☐

[1]

16 **(a)** What is meant by the term 'fitness'?

.....

..... **[1]**

(b) Obesity, Type 2 diabetes and a decrease in physical fitness can be consequences of a sedentary lifestyle.

Describe other physical consequences of a sedentary lifestyle.

.....

.....

.....

..... **[2]**

17 Is this statement true or false? Draw a circle around your answer.

A balanced diet is taking in more energy than the body needs for energy expenditure.

True **False**

[1]

18 Water is an important component of any athlete's diet.

Give **one** other component of a diet that is particularly important to a long-distance runner to help provide energy before a race.

..... **[1]**

© OCR 2018

19 Describe **one** practical example of how sport or physical activity might provide the social benefit of belonging to a group.

.....

..... **[1]**

20 Vitamins provide many health and fitness benefits which can help sports performers.

Name a food which is a good source of vitamins.

..... **[1]**

© OCR 2018

Section B

Answer all the questions.

21 Emotional well-being can be affected by leading a sedentary lifestyle.

(a) (i) What is meant by the term 'sedentary lifestyle'?

.....

..... **[2]**

(ii) Describe **two** ways in which a sedentary lifestyle might lead to low levels of self-esteem.

1. .....

.....

2. .....

..... **[2]**

(b) Explain how physical activity can help to raise levels of self-esteem.

.....

.....

.....

..... **[2]**

(c) Explain how the physical and emotional benefits of physical activity can help young people to manage stress.

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2018

22 (a) Using practical examples, explain how SMART goal setting can improve a specific skill in a physical activity or sport of your choice.

Physical activity/sport: .....

Skill: .....

Explanation: .....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2018

(b)* Using practical examples, discuss how goal setting can motivate performers in physical activity and sport.

Describe how appropriate goal setting can help to prevent injury to performers.

.... **[6]**

© OCR 2018

23 **Fig. 1** below shows the number of adults (in millions) taking part in sport at moderate intensity by frequency (Active People Survey, Sport England).

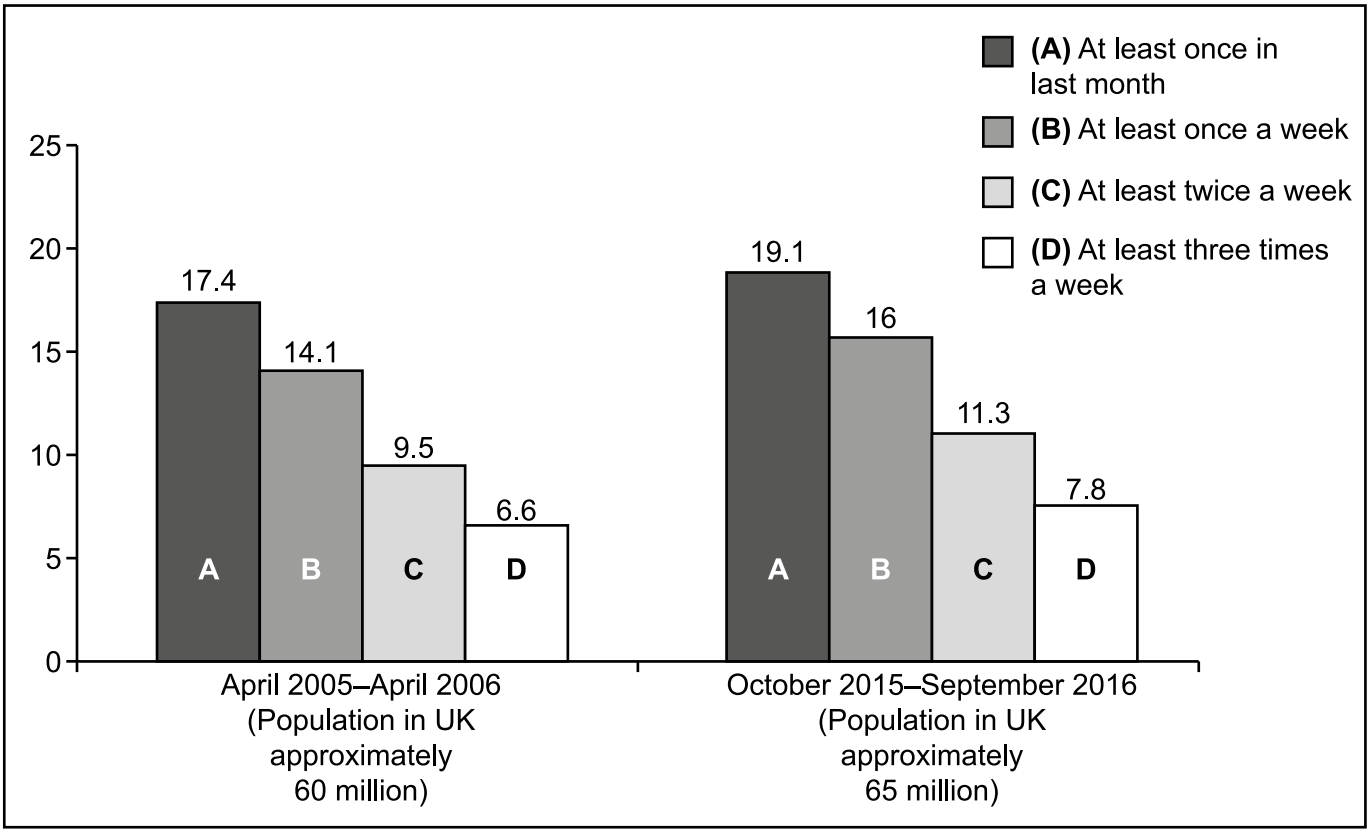


Fig. 1

(a) Using the data shown in **Fig. 1** above, assess the trends in participation in sport in 2015/16 and those in 2005/06.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2018

(b) (i) Using practical examples, describe strategies to increase the frequency of adults taking part in sport.

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

(ii) Identify **two** possible factors that prevent adults participating in sport in the UK.

1. .....

2. .....

[2]

END OF QUESTION PAPER

© OCR 2018

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2018

© OCR 2018

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© OCR 2018

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© OCR 2018

PLEASE DO NOT WRITE ON THIS PAGE

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© OCR 2018

OCR
Oxford Cambridge and RSA

GCSE

Physical Education (9–1)

Unit **J587/02:** Socio-cultural issues and sports psychology

General Certificate of Secondary Education

Mark Scheme for June 2018

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not–for–profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2018

Annotations used in the detailed Mark Scheme

Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO2 **general** application of K&U on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 **specific examples** on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached
BP	Blank Page (stamp on all blank pages); may also use 'Seen'.		

- **KU, EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.

- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			One mark for: Helps to control/lower heart rate or keeps the performer calm /relaxes or less /control anxiety / lowers arousal or blocks action of adrenaline or improves concentration / focus	**1** 1 x (AO1)	Mark the first response only Accept: Calms nerves = BOD A steady hand/decreasing muscle tremors = BOD
2			Two marks from: 1. Males more likely to participate **in sport** or females less likely to participate in sport or more male dominated sports 2. Males more likely to participate **in competitive** activities or females less likely to participate in competitive activities or females more likely to be intimidated 3. (Some) activities **traditionally** linked to males/females or females don't want to play male sport or males don't want to play female sport or examples of this e.g. males for boxing and females for dancing 4. **Less funding** / sponsorship available for female sports (that leads to lower participation) OR better funding for males (that leads to higher rates of participation) 5. Male / female **discrimination** (e.g. females banned from golf clubs) 6. Fewer / lack of female role models or lack of female sport media coverage or focus on males / more male role models (in media) 7. Examples of health factors affecting female participation e.g. pregnancy / menstrual cycle	**2** 2 x (AO1)	Do not accept: stereotyping (on its own) / less prize money for females Lack of opportunities/clubs/teams for females = TV

Section A					
Question			**Answer**	**Marks**	**Guidance**
3	**(a)**		One mark from: The pressure / expectation to win or to win or to gain an (unfair) advantage or pressure from fans / spectators / parents / coaches / team mates or to enhance performance or because you are losing or to gain financial reward or spectators might copy performer deviance or a reaction to (poor) decisions by officials or as retaliation / revenge or copying others or as a result of taking drugs	**1** 1 x (AO1)	Pressure (on its own) = TV Frustration (on its own) = TV Frustration due to losing = 1 mark To win at all costs = 1 mark
	(b)		Two marks for: **Examples must be from <u>different</u> sports for 2 marks** **Can be the same type of gamesmanship e.g. time wasting but must be different actions – see examples in guidance** e.g. a footballer diving to claim a foul e.g. a netball player holding her opponent e.g. a tennis player delaying the service e.g. a sprinter distracting another competitor e.g. moving the ball closer to the posts when taking a penalty kick in rugby	**2** 2 x (AO2)	Accept: Any suitable different examples of gamesmanship from <u>different</u> named sports Accept: e.g. make them nervous by intimidating in the scrum in rugby Accept e.g. In football, kicking the ball out to waste time and in tennis a player tying laces to waste time = 2 marks e.g. In football a player feigning injury and tennis player feigning injury = 1 mark only Do not accept: an aggressive act / punching/kicking
4			One mark for: **C**	**1** 1 x (AO1)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
5			One mark for: The influence of commerce/trade/business on sport to make a **profit/money** or those that organise/ promote sport try to make **money/profit**	**1** 1 x (AO1)	
6			One mark for: Twitter / Facebook / Snapchat / Instagram / You Tube / Strava	**1** 1 x (AO1)	Accept: Any relevant example of social media
7			Three marks for: **16 50 once**	**3** 3 x (AO1)	
8			Two marks for: 1. Imagery or imagining success/winning/playing well or visualisation 2. Mental rehearsal or mentally going over actions/strategies 3. Selective attention or blocking out distractions or focussing 4. Thinking positively or negative thought stopping or (positive) self-talk or self-encouragement 5. Relaxation techniques or meditation or mindfulness	**2** 2 x (AO1)	Listen to music to calm down = pt 5 (BOD) Listen to music (on its own) = TV Breathing techniques (on its own) = TV Breathing techniques to calm down = pt 5 (BOD)
9			One mark for: Accept any sports skill example that is clearly **affected by the environment** and therefore an open skill. E.g. receiving a serve in tennis or a goalkeeper attempting to save a penalty or pass in football / netball or a block in volleyball etc.	**1** 1 x (AO2)	Look for examples where the performer adapts their actions as a result of environmental aspects. Do not accept: e.g. Tennis serve unless qualified e.g. changing your tennis serve as a result of your opponent moving e.g. examples such as Basketball free throw or taking a penalty in football
10			Two marks for: 1. (Definition of motor skills): An action/task/skill that involves (body/limb) **movement / movements** 2. (Example of pre-determined) e.g. a footballer **deciding/knowing/remembering / meaning to** where to	**2** 1 x (AO1) 1 x (AO2)	Do not accept 'movement' (on its own) Accept any relevant practical example for pre-determined characteristic (pt 2) Accept practical examples using the term routine e.g. gymnastic **routine** or dance **routine** etc. Accept rehearsal with example

Section A					
Question			**Answer**	**Marks**	**Guidance**
			kick the ball before taking a penalty or a Netball player **deciding/knowing/remembering/meaning** where to pass the ball next before receiving the ball from a fellow player etc…		
11			One mark for: (Knowledge of performance) = **D** (A netball player being told by her team-mate that her shooting technique was incorrect in a previous match)	**1** 1 x (AO2)	
12			**True**	**1** 1 x (AO2)	
13			Two marks for: 1. (advantage) Can give confidence/sense of security or it can be safer practice or it can give (some) idea of how the skill feels / kinesthesis 2. (disadvantage) It can lead to over-reliance or can give sense of false security or it takes away the true sense/feeling of the skill or slows down the learning of the skill	**2** 2 x (AO3)	Do not accept: Opposites for more than one mark e.g.: Advantage - can give idea of the feeling of the skill Disadvantage – not the true feeling of the skill (one mark only)
14			One mark for: Accept any relevant example of manual guidance in sport to **physically** help/aid a performer e.g.: Physically **support** a gymnast doing a handstand or a coach **holding** the arms of a golfer and forcing their arms through a drive movement	**1** 1 x (AO2)	A coach helping a gymnast do a handstand = TV (must have an idea of physical help/support) Do not accept: guiding (in question)
15			One mark for: **B -** baked jacket potato	**1** 1 x (AO1)	
16	a		One mark for: (Fitness) is a person's capacity to carry out activity without getting tired/fatigued OR what your body is capable of in sport OR being able to cope with the demands of everyday life / sport /	**1** 1 x (AO1)	Accept: The ability to function effectively / efficiently

Section A					
Question			**Answer**	**Marks**	**Guidance**
			environment OR how efficient/effective is your body OR how much work you can do before stopping/getting too tired		
	b		Two marks for: 1. Increased likelihood of injury 2. Increased likelihood of raised blood pressure 3. More likely to suffer or increase in risk of CHD / heart attack / stroke / heart disease 4. More likely to suffer or increase risk of respiratory / lung disease 5. A decrease in bone density or more likely to suffer bone disease 6. May cause poor posture 7. Increase in weight	**2** 2 x (AO1)	Do not accept: A decrease in physical fitness, obesity and Type 2 diabetes (in question) Increased likelihood of illness (on own)= TV Do not accept heart disease or examples of illnesses (on their own) – needs a **description** e.g. increase in heart disease Do not accept stiffness of joints / lack of mobility / not having enough energy (physical fitness in question) Do not accept arthritis Accept Osteoporosis (pt 5) Accept: Any other described named illness that is a consequence of a sedentary lifestyle.
17			One mark or: **False**	**1** 1 x (AO1)	
18			One mark for: **<u>Carbohydrates/carbs</u>**	**1** 1 x (AO1)	Do not accept: a food type rather than the component e.g. eating bananas = TV
19			One mark for: Joining a football/hockey/netball / sports team or taking part in sport **to** make friends/meet new people or to co-operate or gain a sense of belonging or for communication skills / leadership OR going to a football match to make or be with friends OR attending a football team dinner to be with my friends	**1** 1 x (AO2)	Accept: any team game or group physical activity or attending a sports event with a description Do not accept: merely the name of a sport / activity – there must be a description of the activity linked to social benefit of belonging to a group e.g. …. '…playing football to make friends…' Do not accept: team / social skills as a social benefit / engage = TV
20			One mark for: Fruit such as oranges/raspberries or vegetables such as broccoli/kale etc. or milk / orange juice etc…	**1** 1 x (AO1)	Accept: any food that is high in vitamins Fruit / vegetables = TV Meat = TV

Section A					
Question			Answer	Marks	Guidance
					Red meat / chicken (or any named meat) = 1 mark Fish = BOD

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**	**(i)**	Two marks for: 1. (sedentary) Inactivity or lack of activity/exercise 2. (lifestyle) A way of life or how you live your life or your actions/behaviour or an example of sedentary lifestyle e.g. sat at desk all day	**2** 2 x (AO1)	lack of physical activity in the work place and/or in leisure time = 2 marks (lack of activity with link to lifestyle) If just an example is given award pt2: e.g. 'sat at a desk all day' or 'office job' = 1 mark Do not accept 'lifestyle' <u>on its own</u> e.g. A lifestyle that does not involve physical activity = 1 mark (pt 1) e.g. A way of life that does not involve physical activity = 2 marks (pt 1 and pt 2) 'couch potato' = TV
		(ii)	Two marks for: 1. A lack of energy or feeling lethargic or lack of fitness 2. More likely to be obese/overweight or negative body image 3. Lack of interest / motivation 4. Less likely to benefit from social interaction or fewer social experiences or poor communication or fewer friends or less likely to belong to a group or isolated/loneliness 5. Lack of motor skills/ability	**2** 2 x (AO1)	Do not accept 'lack of confidence' (on its own)

Section B					
Question			**Answer**	**Marks**	**Guidance**
	(b)		Two marks for: 1. Can help to raise **energy levels / fitness** so that **you feel better** about yourself 2. Have a better body **image / lose weight / way you look** or you look better and therefore **feel better / positive** 3. More likely to be **healthier** and **feel better / positive** 4. Raise your levels of **confidence or being successful / winning / achieving a goal / perform well** 5. Activity release **hormones** / endorphins / chemicals that make you **feel better**/happier/positive 6. More likely to engage in **social relationships / more likely to have friends that reduces loneliness /** make **you feel more connected** with others 7. **Learning** new skills will **stimulate** your interest / make you happy	**2** 2 x (AO3)	Accept only **explanations** rather than mere identification of advantages
	(c)		Four marks for: 1. Less likely to be **injured** and therefore less stressed 2. Less likely to be **ill** or suffer from disease / named illness or feel healthier therefore less stress 3. More likely to **control your weight** and therefore less likely to be stressed 4. Have better body **posture** and therefore less stress 5. More likely to be **fit** and therefore less stressed 6. Activity can release stress busting **hormones** /endorphins 7. Get rid of excess energy / tension for less stress / relaxes you or can feel a **cathartic**/frustration/aggression/anger release when exercising and therefore less stressed 8. Can **forget** stressors or escapism or clear your mind 9. Make you **more confident** and therefore less stressed 10. Better **body image** so you feel less stressed about your	**4** 4 x (AO3)	**Responses** should refer to **<u>ways of managing stress</u>** : e.g. lowering / controlling stress or being happier / less anxious / feeling better / relaxes / removes worries etc… Do not accept (on its own) managing stress (in question) Accept physical activity may help to control your weight and increase your fitness to make you less stressed = 2 marks

Section B					
Question			**Answer**	**Marks**	**Guidance**
			appearance 11. Using **relaxation** techniques from yoga classes may lead to less stress/anxiety or exercise releases muscular tension so you feel relaxed 12. Having **fun** / enjoyment reduces stress or enjoying being with others/friends to reduce stress 13. **Winning** a game/tournament / good performance can improve self-esteem / reduce stress. 14. **Sense of belonging** or providing a support network to reduce stress		
22	**(a)**		Four marks for: 1. Skill practice should be **measurable** e.g. to improve shooting in hockey see how many shots out of 20 you can score. 2. Skill practice should be **achievable** e.g. the hockey player should be at the right standard to be able to cope with the practice **OR agreed** e.g. the hockey player accepts the target of scoring 10 goals in the season 3. Skill practice should be **recorded or realistic (see example for achievable)** e.g. the amount of shots scored should be recorded / kept a diary by the player/coach 4. The goal set should be within a **time(-frame)** e.g. After 3 weeks of shooting practice the amount of goals scored by the hockey player should be greater	**4** 4 x (AO2)	One **specific skill** must be used for marks to be awarded. Accept if embedded in examples and not listed on the line provided. Accept only the first named skill in the explanation. Do not accept other named skills as examples in the explanation. No marks available for **'specific'** points (specific in the question) Each (S)MART point must be linked to a practical example to score marks Accept realistic for recorded but as a substitute for achievable

Section B				
Question		**Answer**	**Marks**	**Guidance**
22	(b)*	**Level 3 (5–6 marks)** • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. **Level 2 (3–4 marks)** • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. **Level 1 (1–2 marks)** • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification	**6** 4 x (AO2) 2 x (AO3)	**Discriminators - Level 3 (5–6 marks)** • Some imbalance between the two parts of the question may be present for 5 marks. • At 6 marks, both are equally well addressed. • Responses demonstrating only some (AO2) application of goal setting to motivation are Level 2. • Detailed discussion linking goal setting to motivation (AO3) • Full description of preventing injury via goal setting with much development and relevant practical examples (AO3) **Discriminators - Level 2 (3–4 marks)** • Satisfactory level of success with more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks). • Responses demonstrating satisfactory (AO2) application are Level 2. • Satisfactory discussion linking goal setting to motivation (AO3) • Satisfactory description of preventing injury via goal setting with some development and mostly relevant practical examples (AO3) **NOTE: If no injury prevention points made marks are unlikely to be above 3 marks in total** **Discriminators - Level 1 (1-2 marks)** • Responses only demonstrating basic AO2 application are Level 1. • Listing few ways that goal setting might lead to motivation with little or no development and few if any relevant practical examples (AO2) • Listing few ways that goal setting might prevent injury with little or no development (AO2) • An attempt at all aspects of the question indicates the top of this level (AO3) **(0 marks)**

Section B				
Question		**Answer**	**Marks**	**Guidance**
		• technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. **<u>Indicative content (Using practical examples, discuss how goal setting can motivate performers in sport.)</u>** 1. Goal setting can **inspire / drive performers** • Drive challenge / excite to achieve your best or something to aim for • Improved performance (can motivate) • EG to set a time for a personal best in the 100 metres 2. Goal setting (can motivate) performers to **train harder / more regularly /stick to training or start training (seriously)** • The drive to train / prepare more effectively because of the need to fulfil goal / to win / be better • Task adherence • EG a tennis player puts more hours in to practice her forehand 3. Goal setting using the **SMART** method (can be motivating) • Reference to element/s of SMART • Can give focus • Enables monitoring progress		• no response or no response worthy of credit. **<u>Indicative content (Describe how appropriate goal setting can prevent injury in sport.)</u>** 5. Ensure goals **are achievable** / realistic • To avoid too much stress physically and psychologically or too much arousal – causing injury 6. Ensure that goals are **not too challenging** / strenuous or that you work on short term goals leading up to longer term goals • Work / train at the level appropriate to your ability / fitness to prevent injury 7. Agree **goals** with coach / trainer • Ensure expert advice about safe practice in training / performance to avoid injury 8. Set goals **that include risk assessment** • Think about the dangers of the activity 9. Set goals that encourage the learning **of correct techniques** • Learning the right technique will lead to less likelihood of sustaining injury • EG muscle strain or tendonitis 10. Use **extension of SMART – SMARTER** goal setting • Making goals exciting / ethical / evaluate • Recording / revising goals

Section B				
Question		**Answer**	**Marks**	**Guidance**
		• EG A rugby player sets a personal goal of completing 80% of successful tackles in the next game 4. Goals can be split into **short / long-term goals** • Short term goals can incrementally lead to the fulfilment of long term goals or achieving targets step by step to gain good overall performance • Goals achieved can increase confidence • EG A gymnast who wishes to improve her floor routine will concentrate firstly on her opening tumbling sequence		**Annotations:** Numbered points = use **KU** for AO2 **general application** of K&U EG Bullet points = use **EG** for AO2 **specific examples** Bullet points **= DEV** for **developed** AO3 points

<table>
<tr><th colspan="5">Section B</th></tr>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>23</td><td>(a)</td><td></td><td>Four marks for:
1. (Total) number of adults who participate in sport has risen between 2005 and 2015
2. The frequency of moderately intense exercise has risen between 2005 and 2015 or a rise for all frequencies
3. Group B / once a week increased the most or Group D / 3 times a week has increased the least
4. More adults participate for once a month rather than any other category. A / once a month is greater than B, C or D.
5. A relatively low level / 25 – 30% / 16 – 20 million / less than a third of adults' exercise for more than once a week (compared to the population as a whole)
6. Or the rise in population has resulted in more participation
7. Little or no change in percentage/proportion of population participating (in any group/frequency)</td><td>4
4 x (AO3)</td><td>For examiners' reference:
<table><tr><th>Group</th><th>2005/6</th><th>% of popl</th><th>2015/16</th><th>%</th></tr><tr><td>A Once a month</td><td>17.4m</td><td>29.0</td><td>19.1m</td><td>29.4</td></tr><tr><td>B Once a week</td><td>14.1m</td><td>23.5</td><td>16m</td><td>24.6</td></tr><tr><td>C Twice a week</td><td>9.5m</td><td>15.8</td><td>11.3m</td><td>17.3</td></tr><tr><td>D Three a week</td><td>6.6</td><td>11.0</td><td>7.8m</td><td>12.0</td></tr><tr><td>Popl</td><td>60m</td><td></td><td>65m</td><td></td></tr></table>
Accept reference to either group letters (A – D) or frequencies (e.g. once a month)</td></tr>
<tr><td>23</td><td>(b)</td><td>(i)</td><td>Four marks for:
1. More information / education on the benefits opportunities of regular sports participation
e.g. TV advertising to show benefits of regular exercise or
e.g. This Girl Can / advertising local clubs on the radio or Change 4 life</td><td>4
4 x (AO2)</td><td>Only give a mark if each point is linked to a practical example</td></tr>
</table>

Section B					
Question			Answer	Marks	Guidance
			2. **Regular opportunities** for coaching / instructing to enable more frequent participation eg fitness instructors available across the working day and evening 3. **More facilities** available for regular participation eg ensuring that each community is served by a leisure centre 4. **Facilities available for longer** during the day to enable regular participation eg local swimming baths open early morning and close late evening 5. More **accessible facilities** or more **localised** facilities or **better transport** arrangements to access facilities eg facilities have wheelchair ramps or a (free) local bus service is provided 6. **Cheaper facilities** for sport or concessions for more adults to be involved eg the local leisure centres give concessions for the elderly or give cut price admission for regular users 7. Introduction of **adapted games** e.g. walking football, walking basketball, touch rugby for adults. 8. Activities**/sessions for adults only** or age-group sessions eg adult / 40 plus / 50 plus fitness classes 9. Provision for childcare eg gyms that provide childcare/ nursery/ playgroup/ youth group so that parents can exercise.		

Section B					
Question			Answer	Marks	Guidance
		(ii)	Two marks for: 1. Illness / disease or health problems or injury 2. Obesity / overweight 3. Disability 4. Lack of facilities / equipment or lack of instructors/coaches/expertise to help 5. Lack of interest / motivation or lethargy 6. Friends / family /social group do not participate or lack of role models 7. Discrimination (age/gender/ race etc) 8. Lack of awareness / information about opportunities to participate 9. Cultural or religion / religious influences to prevent participation 10. Lack of confidence or too embarrassed to participate 11. Environment or climate or location 12. Lack of funds or too expensive or not good value for money 13. (perceived) lack of time or too many work commitments or other family/caring responsibilities 14. Lack of adult teams / provision for adults	**2** 2 x (AO1)	Mark **first two** responses Pt 12 cost = TV Pt 13 time = TV Age = TV

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Oxford Cambridge and RSA Examinations
is a Company Limited by Guarantee
Registered in England
Registered Office; The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA
Registered Company Number: 3484466
OCR is an exempt Charity

OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553

© OCR 2018

OCR
Oxford Cambridge and RSA

Wednesday 15 May 2019 – Morning

GCSE (9–1) Physical Education

J587/01 Physical factors affecting performance

Time allowed: 1 hour

No additional material is required for this Question Paper

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in the question marked with an asterisk (*****).
- This document consists of **16** pages.

© OCR 2019 [601/8442/5]
DC (ST/CT) 178101/5
OCR is an exempt Charity

Section A

Answer **all** the questions.

1 A warm up prepares the body for physical activity by increasing the temperature of the muscles.

Describe **two** other physical benefits a warm up has on the muscular system.

1. .....

.....

2. .....

.....

[2]

2 **(a)** State the function of valves in the heart.

..... **[1]**

(b) The bicuspid and tricuspid valves are structures in the heart.

Name **one** other valve in the heart.

..... **[1]**

3 Identify a synovial joint in the body that allows more than two types of movement.

..... **[1]**

4 Name the main muscle group used, and the plane of movement passed through, while performing a sit up.

(i) Muscle group:

..... **[1]**

(ii) Plane of movement:

..... **[1]**

© OCR 2019

5 **Fig. 5** shows the performance of a gymnastic move.



Fig. 5

Name the axis of rotation in **Fig. 5**.

..... **[1]**

6 Complete the following statement.

The action of a biceps curl is an example of a ..... class lever. **[1]**

© OCR 2019

7 **Fig. 7** shows a diagram that highlights one plane of movement.

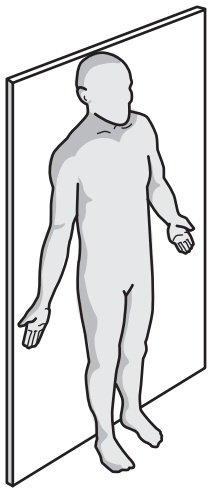


Fig. 7

(a) Name the movement plane highlighted in **Fig. 7**.

..... **[1]**

(b) Identify a sporting skill that passes through the movement plane in **Fig. 7**.

..... **[1]**

8 Which one of the following describes the correct pathway of air through the respiratory system?

Put a tick (✓) in the box next to the correct answer.

A Mouth, trachea, bronchiole, bronchi, alveoli ☐

B Nose, trachea, bronchi, bronchiole, alveoli ☐

C Mouth, trachea, alveoli, bronchi, bronchiole ☐

D Nose, bronchi, bronchiole, trachea, alveoli ☐

[1]

9 A wet and slippery floor in a sports hall is a potential hazard.

Identify **two** other hazards in a sports hall.

1. .....

2. .....

[2]

© OCR 2019

10 Power is an important component of fitness required in many sports and can be measured by using the standing broad jump test.

Name another suitable test for power and describe **one** feature of this test.

(i) Name of test:

..... **[1]**

(ii) Feature of test:

.....

..... **[1]**

11 Describe the following key components of a warm up using a practical example for each.

(i) Mobility:

.....

..... **[1]**

(ii) Dynamic movements:

.....

..... **[1]**

12 A cricket player has just caught a hard ball.

Name a bone in the hand that is at risk from injury as a result of the impact of the ball being caught.

..... **[1]**

13 Flexion and extension are two types of movement which are involved to allow circumduction around a joint.

Name the other **three** movements needed for circumduction around a joint to occur.

1. .....

2. .....

3. .....

[1]

© OCR 2019

14 Describe **one** difference between aerobic and anaerobic exercise.

Give a practical example of each type of exercise.

Difference: .....

.....

.....

Example of aerobic exercise: .....

Example of anaerobic exercise: ..... **[2]**

15 Define stroke volume.

..... **[1]**

16 During exercise cardiac output changes.

(i) Explain what is meant by the term cardiac output.

.....

..... **[1]**

(ii) State how cardiac output changes during exercise.

..... **[1]**

17 Describe the role of tendons during physical activity.

..... **[1]**

18 **(a)** Describe capillarisation.

..... **[1]**

(b) Capillarisation is a short term effect of exercise.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

© OCR 2019

19 Name the type of interval training used when a performer alternates between short bursts of speed followed by periods of recovery.

..... **[1]**

20 Give **one** example of personal protective equipment that will protect the cranium.

..... **[1]**

© OCR 2019

Section B

Answer **all** the questions.

21 (a) **Fig. 21.1** shows the national norms for the sit and reach test for 16–19 year olds.

Gender	Excellent	Above average	Average	Below average	Poor
Male	>14	11–14	7–10	4–6	<4
Female	>15	12–15	7–11	4–6	<4

Fig. 21.1

Fig. 21.2 shows a set of sit and reach results for a GCSE PE class.

Name	Gender	Age	Measurement
Emma	Female	16	15.5
Abdul	Male	16	9.5
Olivia	Female	16	11
Noah	Male	16	12
Farah	Female	16	16
Liam	Male	16	3.5

Fig. 21.2

(i) Name the fitness component that is measured using the sit and reach test.

..... **[1]**

(ii) Using the values in **Fig. 21.1** state how many students in **Fig. 21.2** are in the average range.

..... **[1]**

(iii) Analyse the results in **Fig. 21.2** and suggest reasons for the differences between students who were scored as excellent compared to those who were given a poor rating.

.....

.....

.....

.....

.....

..... **[2]**

© OCR 2019

(b)* Specificity is one principle of training that would allow a gymnast to focus on relevant exercises suited to their routine.

Using practical examples, explain the use of other principles of training in a gymnastic training programme.

Evaluate reasons why some gymnasts may use beta blockers within their training programme.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[6]**

© OCR 2019

22 **(a)** Describe, using a sporting example for each, how the skeleton allows the following functions.

Protection:

.....

.....

.....

Movement:

.....

.....

.....

[2]

(b)

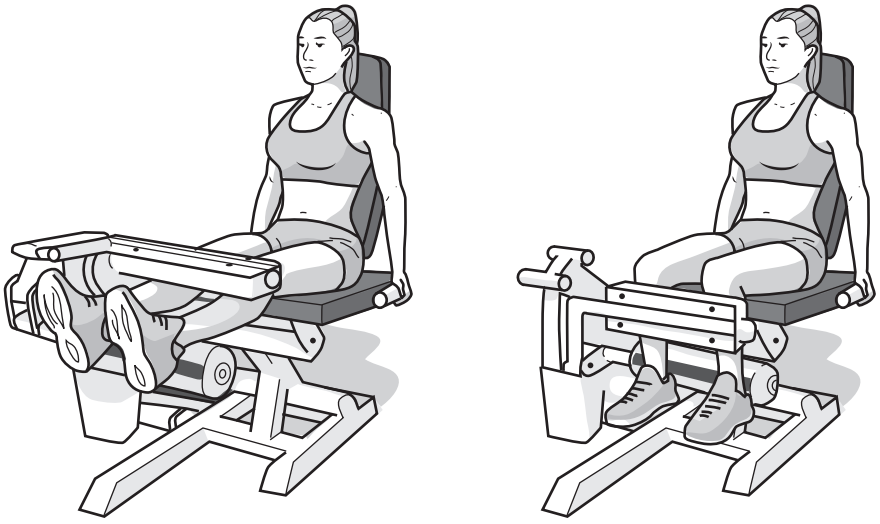


Fig. 22

(i) Name the leg muscle that contracts during the extension phase of the exercise in **Fig. 22**.

..... **[1]**

© OCR 2019

(ii) Explain how the pair of muscles at the knee work together during the extension phase of the exercise in **Fig. 22**.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[2]**

(iii) Name the **two** articulating bones at the hip during the movement in **Fig. 22**.

1. .....

2. .....

[2]

(c) In the box below, draw and label the lever system used at the neck when heading a ball in football.

[3]

© OCR 2019

23 **(a)** Describe the long term effects of a six-month training programme on the heart.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[5]**

(b) **(i)** Describe the differences between the pulmonary artery and the pulmonary vein.

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

(ii) Name the blood vessel responsible for returning deoxygenated blood back to the heart and into the right atrium.

..... **[1]**

END OF QUESTION PAPER

© OCR 2019

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2019

© OCR 2019

© OCR 2019

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© OCR 2019

GCSE (9–1)

Physical Education

J587/01: Physical factors affecting performance

General Certificate of Secondary Education

Mark Scheme for June 2019

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2019

Annotations

Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO1 on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached
BP	Blank page		

- **KU, EG** and **DEV** used <u>instead</u> of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.
- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Question			Answer	Mark	Guidance
1			2 marks from: 1. Increased flexibility / elasticity / pliability (of muscles) **OR** increased range of movement / mobility 2. Increased pliability of **tendons / connective tissue** 3. **Increased / more / faster** blood (flow) / oxygen to **muscles** 4. Increased speed / strength **of contractions** 5. **Reduced** risk of injury 6. Delays / reduces (build-up of lactic acid) / delays fatigue	**2** (AO1)	**Do not accept:** Benefits to other systems such as heart, e.g. initiates vascular shunt is a cardiovascular benefit **Prevent** injury = TV (does not prevent, only reduce …) Warming up the body / muscles = TV More blood to body = TV Muscles are stretched / loose = TV Muscles ready to work = TV **Prevents** lactic acid build-up = TV
2		**(a)**	1 mark for: Prevent back flow of <u>blood</u> **OR** prevents blood from returning to where it came from **OR** prevents blood flowing in wrong direction	**1** (AO1)	 Keeps blood flowing in correct direction = BOD Stops blood travelling backwards = BOD Prevents backflow on its own = TV Blood flow in one direction = TV
		(b)	1 mark for **(Mark 1st answer only)**: Semi-lunar / aortic / pulmonary (valves)	**1** (AO1)	**Do not accept:** Bicuspid / mitral / tricuspid valves / aorta / pulmonary artery
3			1 mark for **(Mark 1st answer only)**: Ball and socket / hip / shoulder **OR** gliding / condyloid / wrist / knuckle **OR** saddle / base of thumb	**1** (AO1)	**Do not accept:** Ankle / thumb / finger on its own **N.B. Ankle is a uniaxial joint, despite what some websites may show.**
4		**(i)**	1 mark for **(Mark 1st answer only)**: Abdominals **OR** rectus abdominis	**1** (AO2)	**Do not accept:** Abs
		(ii)	1 mark for **(Mark 1st answer only)**: <u>Sagittal</u>	**1** (AO3)	

Question			Answer	Mark	Guidance
5			1 mark for **(Mark 1st answer only)**: <u>Frontal</u>	**1** (AO3)	Sagittal = BOD
6			1 mark for **(Mark 1st answer only)**: <u>Third / 3rd / 3</u> (class lever)	**1** (AO3)	
7		**(a)**	1 mark for **(Mark 1st answer only)**: <u>Frontal</u>	**1** (AO2)	
		(b)	1 mark for **(Mark 1st answer only)**: Any movement that is abduction or adduction, e.g. star jumps / jumping jacks / cartwheel / abduction of the hip during the breaststroke leg action (in swimming) / abduction of shoulder to shoot in netball	**1** (AO3)	**Do not accept:** Movements that involve different planes, e.g. circumduction. Tennis serve on its own = TV (starts with extension) Catching a ball / golf swing / football throw-in = TV BUT: Arm action in golf swing = BOD
8			1 mark for: **(B)** Nose, trachea, bronchi, bronchioles, alveoli	**1** (AO1)	

Question			Answer	Mark	Guidance
9			Two marks from **(Mark 1st 2 answers only)**: 1. The floor is hard / uneven 2. litter / objects / equipment **left out / not put away / in wrong position** 3. equipment is damaged / broken / unsafe 4. Inappropriate footwear being worn 5. Other participants / area too crowded / other activities going on 6. Short run off area **OR** proximity of wall to edge of court **OR** wall surface / fittings 7. Open doors / windows **OR** blocked fire exit 8. Poor / unsuitable lighting	**2** (AO1)	**Do not accept:** Wet / slippery floor answers relating to the weather Temperature / too hot / too cold = TV Litter / objects on its own = TV
10		**(i)**	One mark for **(Mark 1st answer only)**: Vertical / Sargent jump (test)	**1** (AO1)	**Do not accept:** Standing (broad) jump / high jump Accept: phonetic spellings of Sargent
		(ii)	One mark from: 1. Reach up and make a mark / slide ruler up 2. Performer jumps up <u>and</u> touches the board / marks chalk on the wall 3. maximum score / height recorded **OR** distance between two marks is measured **OR** measure how high you jumped (by touching ruler)	**1** (AO1)	**Do not accept:** 'Jump as high as you can' on its own = TV
11		 **(i)** **(ii)**	Two marks from: Mobility – (exercises that) take the joint through its (full) **range** of movement **<u>and</u>**, **e.g.** arm swings / heel flicks / high knees / open the gate / lunges Dynamic movement – movements that involve speed and/or changes of direction **<u>and</u>**, **e.g.** shuttle runs / skipping / running in and out of cones / zig zag running / high knees / heel flicks / agility ladders	**2** (AO2)	**Description and example required for each mark.** **If no suitable example = TV** **If example but no description = TV**

12			One mark for **(Mark 1st answer only)**: Metacarpal(s) / phalange(s)	**1** (AO2)	**Do not accept:** Carpals (in wrist, not hand)

Question			Answer	Mark	Guidance
13			One mark for (in any order): <u>Abduction, adduction and rotation</u>	**1** (AO1)	**All three movements to be named for mark** **1 tick only after 3rd correct movement named.** **If only 1 or 2 named movements then = TV not X**
14			Two marks from: 1 mark for one difference: 1 mark for examples of aerobic and anaerobic exercise (Aerobic) e.g. – long distance running / jogging / 800m + / middle distance running **<u>and</u>** (Anaerobic) e.g. – 100m (sprint) / sprinting	**2** (AO2)	**1 mark for correct statement about the difference between aerobic and anaerobic exercise** Answer must show a difference by stating both sides of one point in the table **Use highlighter for one side correct, tick when 2nd part is seen** Anaerobic is short period of time and aerobic a longer/extended period of time = TV **1 mark for correct practical examples of <u>both</u> types of exercise** 'running', 'cycling' or 'football' = TV; BUT Full game of football / tennis match for aerobic = BOD
15			One mark for: Volume / amount of **blood** pumped from the **left ventricle / ventricles / heart** per **beat / contraction**	**1** (AO1)	Key words are in bold Right ventricle = TV

Aerobic	Anaerobic
1. Continuous exercise / 3+ minutes	Short bursts of exercise / up to 30 seconds
2. Low / moderate intensity	High intensity
3. oxygen is used / no oxygen debt	No / little oxygen used / oxygen debt created
4. Lactic acid not produced / CO_2 / H_2O produced	Lactic acid is produced

16		**(i)**	One mark for: (Cardiac output) = heart rate / HR x stroke volume / SV **OR** Volume / amount of **blood** pumped out of **left ventricle / ventricles / heart** per **minute**	**1** (AO1)	Key words are in bold Right ventricle = TV

Question			Answer	Mark	Guidance
		(ii)	One mark for: Increases	**1** (AO2)	Accept equivalent words i.e. higher But 'quicker' = TV More blood pumped = TV
17			One mark for: 1. **Connects** muscle to bone 2. Assists the muscle with pulling the bone 3. Makes bones move when muscles contract / involved with muscular contractions 4. Give stability / support / shock absorber	**1** (AO1)	Allows movement at a joint = TV Keeps the joint together = TV Holds bones and muscles in place = TV BUT Holds muscles on to bones = BOD
18		**(a)**	One mark for: An increase in the number of / more capillaries	**1** (AO1)	Formation of new capillaries = BOD Bigger capillaries = TV
		(b)	One mark for: False	**1** (AO2)	
19			One mark for: HIIT / High intensity interval training	**1** (AO2)	**Do not accept:** Interval training on its own (in question) Fartlek = X (type of continuous training) **Watch out for HITT or HIT = TV**
20			One mark for **(Mark 1st answer only)**: Helmet / head guard / scrum cap	**1** (AO1)	**Do not accept:** Gum shield / hat / headgear

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Mark</th><th>Guidance</th></tr>
<tr><td>21</td><td>(a)</td><td>(i)</td><td>One mark for (Mark 1st answer only):

<u>Flexibility</u></td><td>1

(AO1)</td><td></td></tr>
<tr><td></td><td></td><td>(ii)</td><td>One mark for:

<u>2</u> OR <u>Abdul and Olivia</u></td><td>1

(AO3)</td><td></td></tr>
<tr><td></td><td></td><td>(iii)</td><td>Two marks for:

<table>
<tr><td>(excellent / Emma / Farah)</td><td>(poor / Liam)</td></tr>
<tr><td>1. were motivated / effort</td><td>Unmotivated / didn’t try</td></tr>
<tr><td>2. warmed up / stretched</td><td>Did not warm up / stretch</td></tr>
<tr><td>3. long / elastic muscles / large range of motion</td><td>Short / inelastic muscles / small range of motion</td></tr>
<tr><td>4. No injuries</td><td>Recovering from injury / suffering from injury</td></tr>
<tr><td>5. Participate in activities that require excellent flexibility, e.g. dance</td><td>Does not participate in activities that require good flexibility</td></tr>
<tr><td>6. Long arms and short legs / high arm:leg length ratio</td><td>Short arms and long legs / low arm:leg length ratio</td></tr>
<tr><td colspan="2">7. Females generally more flexible than males</td></tr>
<tr><td colspan="2">8. The test was not measured correctly / issues over the validity / accuracy of the test</td></tr>
</table>
</td><td>2

(AO3)</td><td>Answers must address both sides for pts 1 – 6

But accept comparative comments such as:

Emma / Farah did a better warm up (than Liam)
OR
Emma / Farah had a more favourable arm:leg length ratio
OR
Liam was not as motivated (to do well in the test)

Pts. 7 and 8 are stand-alone points.

Use highlighter for one side correct, tick when 2nd part is seen

Do not accept:
Emma is more <u>flexible</u> than Liam for pt 3 (flexibility already identified as component being measured in (i)

More active v more sedentary = TV

Liam does not train at all = TV</td></tr>
</table>

Q21(b) Level descriptors	Discriminators
Level 3 (5–6 marks) • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.	**Level 3 Discriminators** • detailed knowledge & understanding of the three other principles of training (overload; progression; reversibility) • several reasons for the use of beta blockers are evaluated • clear and consistent practical application of knowledge & understanding to a gymnast and their training programme • AO2 and AO3 are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed
Level 2 (3–4 marks) • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.	**Level 2 Discriminators** • satisfactory knowledge & understanding of at least two other principles of training (overload; progression; reversibility) • some success in practical application of knowledge & understanding to a gymnast's training programme • at least two reasons for the use of beta blockers may be evaluated at the top of this level • at the bottom of this level, one part of the question may be addressed very well while there is a lack of knowledge in the other part or both parts may have been addressed with some success
Level 1 (1–2 marks) • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.	**Level 1 Discriminators** • basic knowledge & understanding of the principles of training • little or no attempt to evaluate the use of beta blockers • little or no attempt at practical application of knowledge & understanding to a gymnast's training programme • at the top of this level at least one principle of training has been explained using a practical application to a training programme or principles of training have been described with limited application • at the bottom of this level some knowledge of either a principle of training or the use of beta blockers has been shown
(0 marks) • no response or no response worthy of credit.	

<table>
<tr><th colspan="2">Q21(b) Indicative content (3 x AO2, 3 x AO3)</th></tr>
<tr><td>Using practical examples, explain the use of other principles of training in a gymnastic training programme.</td><td>Evaluate reasons why some gymnasts may use beta blockers within their training programme.</td></tr>
<tr><td>1. (Overload)

• Work harder than normal / puts body under stress
• So that fitness adaptations / improvements will occur
E.g. gymnast will lift heavier weights in the gym
• Links with FITT principle
• Increase frequency / intensity / duration or time of training / or change type of training
E.g. gymnast will lift weights for longer / do more sets/reps
E.g. gymnast will put themselves through a higher intensity schedule
E.g. gymnast will do more training sessions per week

2. (Progression)

• Training gradually becomes more difficult / challenging
• Because body has made adaptations / got stronger
• Must be gradual to avoid injury
E.g. gymnast will gradually do more complex vaults / exercises in a floor routine in training

3. (Reversibility)

• Fitness will deteriorate if training stops
E.g. If the gymnast is injured / stops training then the adaptations / fitness will be lost
• Training must be maintained
E.g. gymnast will continue training programme all year</td><td>4. Psychological reasons

• Help keep the gymnast calm / avoid anxiety / relax / reduce stress
• To focus / concentrate better on routine

5. Physiological reasons

• Reduce HR / blood pressure
• Reduce effects of adrenaline
• Useful for balance / stability
• Helps to avoid muscle spasms / reduce muscle tension

6. (Other reasons)

• Win at all costs / get more prize money / fame / sponsorship
• Preparation for major competitions
• To score higher marks from the judges
• To improve performance / be better
• Others are taking drugs / widespread misuse
• Consequences not severe enough / won't get caught
• Pressure from coach / peers / society
• Lack of education / understanding about the dangers</td></tr>
<tr><td>Guidance

Use highlighter to identify overload, progression and reversibility

Use KU for knowledge of principles of training

Use EG for practical examples related to gymnast's training programme

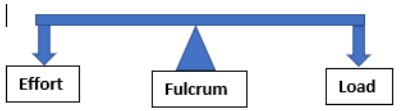
Use DEV for knowledge of use of beta blockers</td><td>Do not credit: knowledge that is not relevant to the question, e.g. side-effects and illegal status of beta blockers OR other principles of training not listed in OCR's syllabus, i.e. tedium – Use SEEN, not IRRL

If SMART described use IRRL once at end of paragraph

All annotations must be in the left-hand margin, not in the body of the text

L1, L2 or L3 must be stamped at the end of the answer</td></tr>
</table>

Question			Answer	Mark	Guidance
22	(a)		Two marks for: 1. (Protection) Bones help to protect vital organs E.g. Cranium protects the brain in rugby **OR** ribs protect the lungs during collisions / impact / tackles in rugby 2. (Movement) Bones provide a surface for muscles / tendons to attach to **OR** provide lever systems **OR** muscles pull bones when they contract **OR** has joints that allow the body to move E.g. elbow joint moves to throw a ball in rounders	**2** (AO2)	**Description and example required for each mark.** **If no suitable examples then no marks.** **Needs specific bone protecting specific organ in e.g. for pt 1** **Elbow** joint moves to throw a ball in rounders = ✓ (description and example given in one sentence) BUT joint moves to throw a ball in rounders = TV **Specific joint movement or named muscle pulling specific bones is required in e.g. for pt 2** **Triceps** contracts to move the arm (bones) to do a football throw-in = ✓
	(b)	(i)	One marks for **(Mark 1st answer only)**: <u>Quadriceps</u> (or one of: rectus femoris, vastus medialis, vastus lateralis, vastus intermedius)	**1** (AO1)	**Do not accept:** **Quads**
		(ii)	Two marks for: 1. (muscles work together as) an **antagonistic** pair / antagonistically 2. <u>quadriceps</u> is prime mover / agonist 3. <u>hamstrings</u> relax / is antagonist	**2** (AO3)	**Do not accept:** Muscles work in pairs (in question) Quadriceps contract (has already been credited in (i)) Hamstrings extend = TV Can score pt 1 even if pts 2 and 3 are wrong way round **No marks for describing knee flexion phase**
		(iii)	Two marks for **(Mark 1st 2 answers only)**: 1. <u>Femur</u> 2. <u>Pelvis / pelvic girdle / ilium</u>	**2** (AO1)	

	(c)		Three marks from: 1. First /1st class lever **OR** class 1 lever. 2. Fulcrum in middle / EFL / LFE 3. effort, fulcrum and load OR load, fulcrum and effort (in correct order) 4. Effort and load arrows both point **downwards**.	**3** (AO3)	**Sub-max 1 mark if no diagram (use S for sub-max)**  Pt 2 – place tick under fulcrum Pt 3 – place tick under 3rd correct name, i.e. load Pt 4 – place tick by arrow on right Accept: resistance for load (as in 2018) Do not accept: force for effort If either arrow point upwards = X No credit for 1 2 3 F L E = SEEN

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Mark</th><th>Guidance</th></tr>
<tr><td>23</td><td>(a)</td><td></td><td>Five marks from:

1. Lower <u>resting</u> heart rate
2. <u>Bradycardia</u>
3. The heart becomes bigger / larger / (cardiac) hypertrophy
4. The heart becomes stronger / stronger contractions
5. Increase in stroke volume / more blood pumped from the heart in one beat
6. Increase in cardiac output / volume of blood ejected from left ventricle in one minute
7. (Increase in) capillarisation (of heart)
8. Reduce risk of heart attacks / cardiac arrest / angina / CHD</td><td>5

(AO2)</td><td>Do not accept:
Adaptations to blood, e.g. more red blood cells
Reduced risk of strokes (vascular and brain, not heart) = TV
Lower blood pressure = TV (vascular)
Healthier heart = TV
Pump blood faster = TV
Lower heart rate = TV
Heart/walls get thicker = TV</td></tr>
<tr><td></td><td>(b)</td><td>(i)</td><td>Four marks from:

<table>
<tr><th></th><th>Pulmonary artery</th><th>Pulmonary vein</th></tr>
<tr><td>1.</td><td>Carries <u>deoxygenated</u> blood</td><td>Carries <u>oxygenated</u> blood</td></tr>
<tr><td>2.</td><td>to the lungs</td><td>from the lungs / back to the heart</td></tr>
<tr><td>3.</td><td>From <u>right ventricle</u></td><td>To <u>left atrium</u></td></tr>
<tr><td>4.</td><td>Carry <u>blood</u> at high pressure</td><td>Carry <u>blood</u> at low pressure</td></tr>
<tr><td>5.</td><td>Thick (walls) / small lumen</td><td>Thin (walls) / large lumen</td></tr>
</table>
</td><td>4

(AO1)</td><td>Responses must compare differences for each mark.

Reference to valves = TV
Speed of blood = TV

Use highlighter for one side correct, tick when 2nd part is seen

If comparison between veins and arteries is done, credit if points are correct (can only hit pts 4 and 5)

Accept comparative terms, e.g. thicker</td></tr>
<tr><td></td><td></td><td>(ii)</td><td>One mark for (Mark 1st answer only):

<u>Vena cava</u></td><td>1

(AO1)</td><td></td></tr>
</table>

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Oxford Cambridge and RSA Examinations
is a Company Limited by Guarantee
Registered in England
Registered Office; The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA
Registered Company Number: 3484466
OCR is an exempt Charity

OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553

© OCR 2019

OCR
Oxford Cambridge and RSA

Friday 17 May 2019 – Afternoon

GCSE (9–1) Physical Education

J587/02 Socio-cultural issues and sports psychology

Time allowed: 1 hour

No additional material is required for this Question Paper

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in the question marked with an asterisk (*).
- This document consists of **16** pages.

© OCR 2019 [601/8442/5]
OCR is an exempt Charity

Section A

Answer all the questions.

1 List the following sports in rank order according to the number of people who participate in the UK, aged sixteen and above:

Tennis, Boxing, Swimming, Cycling

1. (highest) .....

2. .....

3. .....

4. (lowest).....

[1]

2 Women's and men's participation in sport, at least once per week, has increased overall since 2006.

Name **one** other social group whose participation rate in sport has increased since 2006.

..... **[1]**

3 Using practical examples, describe how **two** different types of discrimination reduce participation in sport.

1. .....

.....

.....

2. .....

.....

.....

[2]

4 Give **three** reasons why sportsmanship is highly valued.

1. .....

.....

2. .....

.....

3. .....

.....

[3]

© OCR 2019

5 Stimulants are used by some performers to increase levels of performance.
Give **two** other possible effects of stimulants on a sports performer.

1. .....

2. .....

[2]

6 Deviance in sport involves fair play to gain an advantage over your opponent.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

7 One characteristic of skilled performance in sport is predetermination. An example of this might be in preparing to serve, a tennis player knows where she wants the ball to land.

Draw a line from each of the other characteristics of skilled performance to the most suitable practical example.

Characteristic		Practical example
Predetermination		A rugby player wasting little effort in passing the ball to a fellow player
Coordination		A gymnast effectively linking the different elements of his floor routine
Aesthetic		In preparing to serve, a tennis player knows where she wants the ball to land
Efficiency		A snow boarder performs a stylish trick

[3]

8 Skills can be classified based on how difficult they are.
Where on the difficulty continuum would you place a hockey goalkeeper's diving save?

Indicate by placing the figure **X** on the continuum.

Simple | .....| Complex

[1]

© OCR 2019

9 Give **two** reasons why an athletics coach might use goal setting with one of their athletes.

1. .....

2. .....

[2]

10 What is meant by selective attention when performing a sports skill?

.....

.....

.....

..... **[2]**

11 Describe **one** practical example of positive thinking for a sports performer.

.....

..... **[1]**

12 Give **one** advantage and **one** disadvantage of verbal guidance when teaching a sports skill.

Advantage .....

.....

Disadvantage .....

.....

[2]

13 Which **one** of the following is an example of manual guidance when learning skills in sport?

Put a tick (✓) in the box next to the correct answer.

A A gymnastics coach giving clear instructions to a gymnast about keeping their legs straight and toes pointed. ☐

B A member of a hockey team helping her teammate to stand after a leg injury during a hockey match. ☐

C A trampoline coach using a harness to support a performer doing a somersault during training. ☐

D A swimming coach moving the performer's arm to get the right sense of the front crawl swim stroke. ☐

[1]

© OCR 2019

14 What is meant by the term health?

.....

..... **[1]**

15 While regular exercise is good for us, there can be risks and negative effects as well.
Describe **two** ways in which participating in physical activities can have both a positive and negative effect on health.

.....

.....

.....

.....

.....

..... **[2]**

16 One consequence of a sedentary lifestyle is that bone density decreases.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

17 Give **one** emotional consequence of following a sedentary lifestyle.

.....

..... **[1]**

18 Give **one** social consequence of following a sedentary lifestyle.

.....

..... **[1]**

19 Describe **one** type of physical activity where a performer requires high levels of carbohydrates and water.

.....

..... **[1]**

20 State **one** way that an appropriate level of protein is beneficial to a sports performer.

.....

..... **[1]**

© OCR 2019

Section B

Answer all the questions.

21 Many top performing athletes in sport rely on sponsorship.

(a) (i) What is meant by the term sponsorship?

.....

..... **[1]**

(ii) Give an example of a sponsor for a named sport.

Name of sport .....

Example .....

.....

[1]

(iii) Using practical examples from sport, describe **two** ways in which sponsorship might be an advantage to an elite performer.

1. .....

.....

.....

2. .....

.....

.....

[2]

(b) Explain why sponsors invest large sums of money into sport.

.....

.....

.....

.....

.....

..... **[2]**

© OCR 2019

(c) Explain how commercialisation and high levels of sponsorship could have a negative influence on sport.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2019

22 Feedback is often used by sports coaches for performers to learn and perform movement skills more effectively.

(a) Describe **two** different sports situations when positive feedback can improve performance.

.....

.....

.....

.....

.....

..... **[2]**

(b) Using practical examples from sport, describe knowledge of results and knowledge of performance as types of feedback.

Knowledge of results .....

.....

.....

.....

.....

.....

Knowledge of performance .....

.....

.....

.....

.....

.....

[4]

© OCR 2019

(c) Using a practical example from sport, explain what is meant by negative feedback and evaluate its effectiveness in motivating sports performers.

Negative feedback: .....

.....

Example: .....

.....

Evaluation: .....

.....

.....

.....

.....

..... **[4]**

© OCR 2019

23 Participating in physical activity has been found to affect mental health and well-being.

Poor mental health and well-being amongst young people is a continuing problem.

The graph below in Fig. 23 shows the percentage of 5 to 19 year olds suffering from mental disorders, based on data from a survey by the NHS.

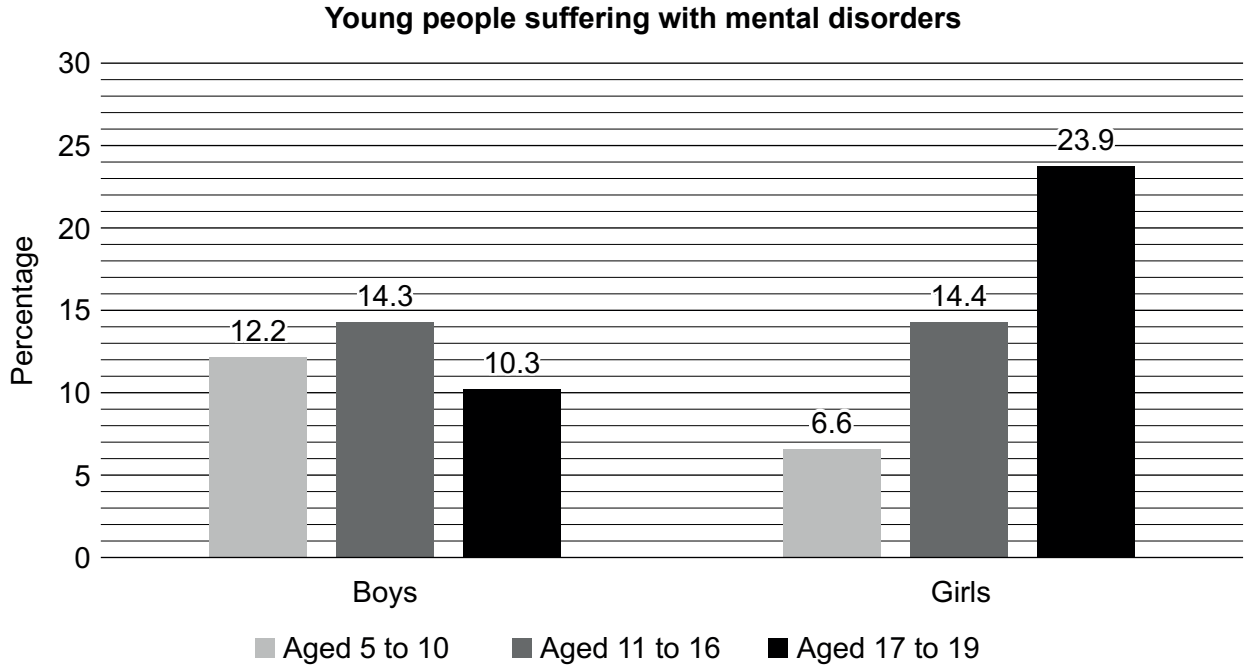


Fig. 23

(a) Using Fig. 23, calculate the difference between:

(i) the percentage of 17 to 19 year old boys and the percentage of 17 to 19 year old girls suffering from mental disorders.

.....

..... **[1]**

(ii) the percentage of 5 to 10 year old boys and the percentage of 5 to 10 year old girls suffering from mental disorders.

.....

..... **[1]**

© OCR 2019

(b) Describe **two** other trends or patterns which the data in Fig. 23 shows.

1. .....

.....

.....

2. .....

.....

.....

[2]

© OCR 2019

(c)* Regular exercise and a balanced diet often results in physical and emotional benefits.

Using practical examples, describe the emotional benefits of participating in physical activity.

Explain how regular exercise and a balanced diet result in long-term benefits on the heart.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[6]**

END OF QUESTION PAPER

© OCR 2019

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2019

© OCR 2019

© OCR 2019

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© OCR 2019

GCSE (9–1)

Physical Education

J587/02: Socio-cultural issues and sports psychology

General Certificate of Secondary Education

Mark Scheme for June 2019

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2019

Annotations used in the detailed Mark Scheme

Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO2 **general** application of K&U on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 **specific examples** on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached
BP	Blank Page (stamp on all blank pages); may also use 'Seen'.		

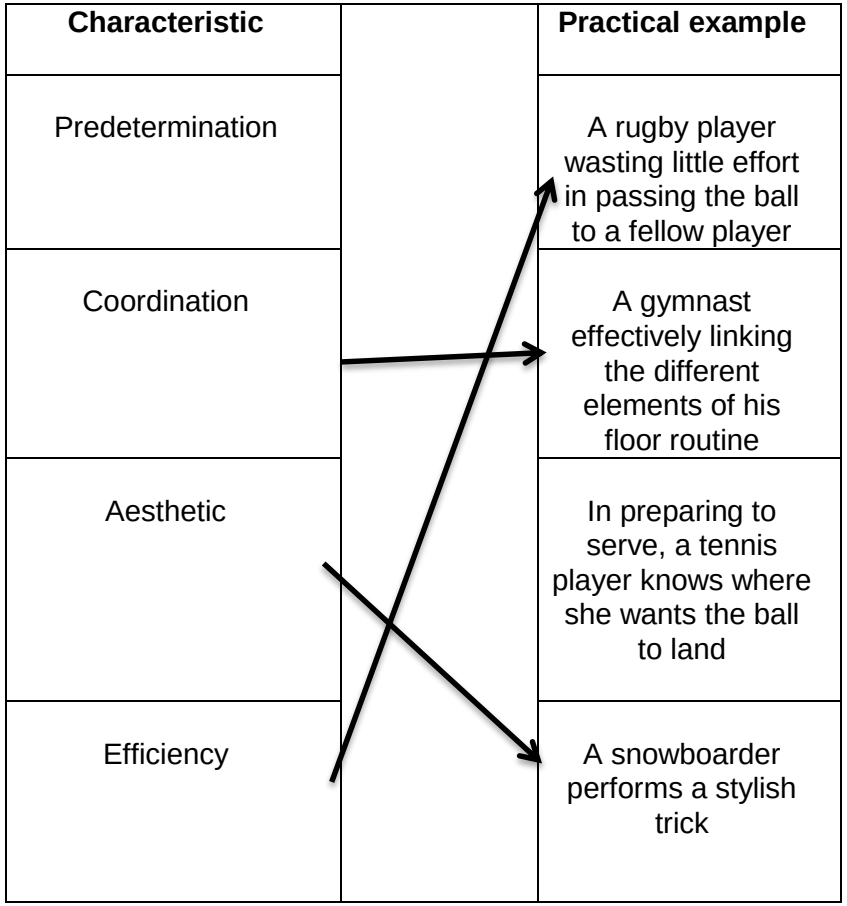
- **KU, EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.
- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

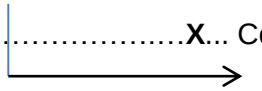
Section A					
Question			**Answer**	**Marks**	**Guidance**
1			1 mark for: 1 (highest) Swimming 2 Cycling 3 Tennis 4 (lowest) Boxing	**1** 1 x (AO1)	**Source:** https://www.sportengland.org/research/about-our-research/active-people-survey/ **Do not accept:** Any other order presented ***Examiners – place a tick or cross at the end of the question and check additional sheets above this question***
2			1 mark from: 1. Disability 2. High/higher socio-economic groups or managerial or middle classes 3. BME / black/Asian/minority / ethnic groups 4. White British group 5. Lower / low socio-economic groups or those who are disadvantaged or unemployed 6. Young / children / pre-16 / 16-21 / elderly / students / teenagers / 16-18 7. (Minority) Faith groups – Hindu/Muslim etc 8. Family – single parent	**1** 1 x (AO1)	*Figures via Sport England (2016)* https://www.sportengland.org/research/about-our-research/active-people-survey/ Do not accept: Age pt6 = TV DNA: gender (in Q) / boys and girls = TV

Section A					
Question			**Answer**	**Marks**	**Guidance**
3			2 marks from: 1 Example showing: **racism** eg A football team who only selects white players or team selection using only white/black or selecting only those from a racial group or spectators being racist and footballer stops/reduces participating 2 Example showing: **Religious discrimination** eg not allowed to swim wearing a hijab or a Muslim not being selected/allowed to play for a rugby team 3 Example showing: **sexism** or males / females being unable to gain access to a sport or information (media) about a sport eg a golf club that restricts female membership eg lack of media coverage of women's football 4 Example showing: **cost**/expense resulting in lack of participation from low socio-economic groups eg Expensive to join a tennis club 5 Example showing: **ageism** eg children not allowed to play at a badminton club 6 Example showing: **homophobia/transphobia** eg Homophobic/transphobic negative comments by fellow players in a rugby team 7 Example showing: discrimination against those with a **disability** eg Wheelchair users not given the appropriate facilities at a sports centre	**2** 2 x (AO2)	Look for description of <u>different</u> relevant examples from <u>different</u> types of **discrimination** for 2 marks. *Question refence: U**sing practical examples,** describe how two different types of **<u>discrimination reduce participation</u>**…* ***Look for examples of discrimination rather than mere outcome facts*** ***Examples can include sports club/team (as well* as named sports)** Eg A sports team will not select any black players = 1 mark A sports team with no black players = 0 marks (this is a mere fact rather than discrimination reducing participation) DNA lack of media coverage = TV (must be a practical example) Accept practical example of influence of spectators on participation

Section A					
Question			**Answer**	**Marks**	**Guidance**
4			3 marks from: 1 So that the sport can be played **fairly** or without cheating/foul play/aggression/deviance 2 Shows **respect** for officials/fellow players / for the sport 3 Reduces the **risk of injury** to participants / to avoid/prevent injury 4 To ensure **friendly** / enjoyable play/avoid unpleasantness/makes you feel good 5 **Promotes** the sport / encourages people to take part/watch sport or gives **good image** of the sport or encourages **sponsorship** or gives sport a good **reputation** / promotes/creates (positive) **role models**	**3** 3 x (AO3)	**Do not accept:** Good for the sport = TV It shows good behaviour = TV Keeps flow of game / easier to ref = TV **Accept:** It's kind = BOD pt4 Shows a good example = BOD pt5

Section A					
Question			**Answer**	**Marks**	**Guidance**
5			2 marks from: 1 Excites/arouses the brain/body or increase in adrenaline / increase in heart rate or raises aggression/competitiveness or raises confidence or increase in euphoria / increase in anxiety / hype you up 2 Increases alertness / attention / awareness / concentration or helps to focus 3 To mask/delay/offset/decrease (short-term) fatigue or increase ability to train/play/compete longer or increase in energy / endurance/stamina or increase in use of fats 4 Decrease in reaction time or increases speed of reactions or quicker reactions 5 Decreases pain 6 Increase possibility of CV disease/problems/heart attack or high blood pressure 7 Increase in liver disease 8 Results in addiction 9 Increase risk of injury 10 Insomnia / lack of sleep / poor sleep patterns	**2** 2 x (AO1)	**Do not accept:** Works as a stimulant or stimulates Increase in reaction time = x Increase level of performance = x (in Q) Must state <u>increase</u> for pts 6,7 and 9
6			1 mark for: **FALSE**	**1** 1 x (AO1)	**Do not accept:**

Section A					
Question			**Answer**	**Marks**	**Guidance**
7			3 marks for:  	**3** 3 x (AO2)	Place a tick next to each correct arrow on the answer paper Accept only one arrow from each box

Section A					
Question			**Answer**	**Marks**	**Guidance**
8			1 mark for: Simple ……**X**... Complex 	**1** 1 x (AO2)	**Accept:** Any position between (and including) the centre and the complex end of the continuum (refer to arrow)
9			2 marks from: 1. For exercise / training adherence or to stick to/continue training 2. To motivate / be dedicated or to keep the training interesting or to give something to aim for or to train harder or to increase intensity of training 3. To improve / optimise performance / technique/ fitness/ health / skills or to get their best time 4. To give information about progress or to know how well the performer is progressing/performing/training 5. Increase levels of satisfaction / pride or to improve confidence 6. To control stress / anxiety / arousal 7. To give focus / keep attention or not to get distracted	**2** 2 x (AO1)	**Do not accept:** To give them a goal/target = TV
10			2 marks for: 1. To **focus**/concentrate (on stimulus/stimuli or on relevant information) 2. To **ignore / block distractions** or to make redundant peripheral stimuli or to filter out unwanted / irrelevant information	**2** 2 x (AO1)	**Do not accept:** Selectively attend or to attend selectively What to set your mind on = TV

Section A					
Question			**Answer**	**Marks**	**Guidance**
11			One mark for: A suitable practical example of positive thinking for a sports performer E.g a goalkeeper saying to himself that he will save the penalty or a rugby player expecting to tackle her opponent effectively. Eg gymnast telling themselves they will do the vault or the rugby player thinking about tackling her opponent effectively Eg a basketball player reflecting on previous successful performances	**1** 1 x (AO2)	**Do not accept: a description without an example.** Accept any suitable example that shows <u>thinking and optimism</u> about outcome. Footballer knowing they will win before a match = BOD
12			2 marks from: One mark sub max for: (advantage of verbal guidance) 1. Quick / immediate 2. Helps to develop / improve / fine tune a skill 3. Motivating / encouraging or increasing confidence 4. Can help to develop a better understanding (of skill and its requirements) / get to know what is right / wrong One mark sub max for: (disadvantage of verbal guidance) 1. Information may be incorrect / misleading 2. Can lead to misunderstanding / confusion or could be misheard or information is unclear/too complex 3. Difficult for performer to create a mental picture or to know / picture what is required or difficult for kinaesthetic learners or you can't get a feel for it or you can't see the skill being performed 4. May be too much information to process or information overload or its hard to describe (accurately)	**2** 2 x (AO1)	Accept: first answer given for each of advantage and disadvantage Do not accept It can be used alongside other feedback or with manual/verbal (on its own without stated advantage) = TV Easy = TV **Examiners to use 'S' for sub max**

Section A					
Question			**Answer**	**Marks**	**Guidance**
13			One mark for: **D**	**1** 1 x (AO2)	
14			One mark for: (A state of complete) physical, mental/emotional (and social) well-being or free from illness/injury or sound in body/mind /spirit or a condition in which someone is thriving/doing well	**1** 1 x (AO1)	
15			Two marks from: 1. (Benefit) Leads to higher level of **fitness**/physical state/flexibility/strength/power **(but)** can lead to injury 2. (Benefit) Can make you **feel better**/positive emotions or better body image or higher self-esteem **(but)** can lead to fatigue/tiredness or frustration or stresses in taking part 3. (Benefit) Make **friends** or positive social interactions or sense of belonging **(but)** could narrow friendship patterns/reject friends who do not exercise or could isolate the participant/friend or could lead to falling out / internal conflict 4. (Benefit) **Less illness** / disease **(but)** more soft tissue injury/minor injuries or fatigue/soreness/aching or breaking bones / fractures 5. (Benefit) better **weight control** / lose weight / avoid obesity **(but)** might lead to eating disorders or too much muscle bulk or unwanted body shape	**2** 2 x (AO3)	Accept **two benefits** and **one** drawback for 2 marks Accept **two drawbacks** and **one** benefit for 2 marks If **two benefits or two drawbacks to health** are described with no evaluation = **one mark only** **Accept:** *Any combination of points as long as each benefit to health is evaluated.* *Allow repetition of injury / fatigue for all drawbacks eg can improve fitness (pt1) and reduce heart disease (pt4) but can increase risk of injury = 2 marks*

Section A					
Question			**Answer**	**Marks**	**Guidance**
16			One mark for: **TRUE**	**1** 1 x (AO1)	*Eg reduces diabetes (pt4) and obesity (pt5) but can lead to increased tiredness = 2 marks*
17			One mark for: Become less happy or more miserable/depressed/lonely Or - Decrease/low levels in self-esteem / confidence or feel less good about yourself / mental illness Or - Poor stress management or higher stress levels or more anxious Or - Have a poor self-image or feel that they are less attractive	**1** 1 x (AO1)	**Do not accept:**
18			One mark from: Not meeting people or being isolated or not being part of a group/team/a community or poor social life/don't have any friends or fewer friends / hard to make friends Or becoming lonely or <u>social</u> anxiety or putting more stress on health providers/service Or difficulty with communication with others	**1** 1 x (AO1)	Do not accept Causes anxiety = TV (must be a social consequence)

Section A					
Question			**Answer**	**Marks**	**Guidance**
19			One mark for: Example of physical activity involving moderate to long-term exercise E.g Athlete running a marathon or boxer training/competing or mid-field player in football/hockey game or intense training session for a football match or running for long distance	**1** 1 x (AO2)	**Do not accept:** The name of a sport/activity on its own – must be an example from a sport or physical activity. Football match = Vague (must have description of moderate/intense activity) **competing in a full 90-minute football match = BOD** Marathon (on its own – no single word answers – describe Q) **Accept:** any other suitable examples eg Marathon runner Look for any running event 400 metres + as a guide
20			One mark for: Helps with (body/cell/muscle/tissue) growth / repair /build up your muscles / muscle hypertrophy / get stronger or for production of haemoglobin/enzymes/hormones or as a (potential) source of energy	**1** 1 x (AO1)	Do not accept: Helps with recovery = TV

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**	**(i)**	1 mark for: 1. (Sponsorship definition) **Financial** support /gives money/help for equipment/ kit / facilities / transport/ nutritional/ scientific support for sport/ event/ competitor/ participant **by an outside agency**/industry/benefactor (for the mutual benefit for both parties) / brands / company	**1** 1 x (AO1)	**Accept:** Any equivalent definition Must have both support type point **and** outside agency type point for mark to be gained **Do not *accept:*** *Company gives sponsorship* *Company gives financial support/money = 1 mark*
		(ii)	1 mark for: 1. (Example of a sponsor in sport) – Any suitable example E.g Adidas for tennis or Barclay's Premier League for football or O2 England rugby union team or Vodafone for England women's cricket team etc	**1** 1 x (AO1)	***For practical example, accept any suitable <u>example of a named sponsor</u> along with a named sport*** *Nike sponsors football teams = 1 mark*

Section B					
Question			Answer	Marks	Guidance
		(iii)	Two marks from: 1. Provides money for performer to train/improve/ pay coaches or so that performer doesn't need to work / be a professional or enables performers to train/compete full-time E.g An Olympic athlete such as Mo Farah can train full-time 2. Free clothing / equipment (for wearing sponsor's clothing /equipment). E.g Andy Murray receives free tennis rackets 3. Can fund transport / accommodation / facilities / entry fees E.g an athlete entering a national marathon competition 4. Can fund education/scholarships (to colleges/university/private education) E.g a top ranked hockey player receives a scholarship to study Sports Science at university 5. Can pay for medical support / treatment E.g A badminton player receiving physio treatment 6. Can encourage / motivate E.g to try and win (sponsored) tennis tournament 7. Gives status/recognition/image or becomes better known athlete or increase in fame Eg A squash player is better known because of being sponsored by Slazenger	**2** 2 x (AO2)	**Do not accept:** Any description without a practical example Receives money / increase in income = TV To get the best products = TV

Section B					
Question			Answer	Marks	Guidance
	(b)		Two marks from: 1. An increase in advertising / publicity / product placement or their products are more readily seen in competitions / on TV or they get to be well-known/familiar / exposed to large audiences / global image/profile 2. Status of product/s increased by being linked to successful sportspeople or high-profile event or good for their image/popularity 3. Increased sales / demand their products or increase in profits/make more money / likely to get more customers 4. Companies get tax concessions 5. Industry/company employees get free tickets / hospitality or increases status of employees	**2** 2 x (AO3)	Look for an explanation (AO3 Q).

Section B					
Question			Answer	Marks	Guidance
	(c)		Four marks for: (commercial negative influences) 1. Athletes / teams may get sponsorship withdrawn / lose sponsorship (if not successful or get injured / misbehave) (AO1) 2. …because commerce wishes only to associate themselves/their products with winning or with healthy/wholesome/socially acceptable/high status activities and personalities or do not wish their products to be associated with dysfunctional/illegal undesirable behaviour (AO3) 3. Too few / a narrow range of sports attracts sponsorship or many sports lack sponsorship or don't want to sponsor minority sports (AO1) 4. …. because sponsors wish to get their products represented in the media as much as possible or to maximize publicity for their products (AO3) 5. Women / disabled / ethnic minority athletes get less sponsorship (AO1) 6. …because sponsors want to market their goods towards other groups eg male sports/abled bodied/white (majority) (AO3)	**4** 2 x (AO1) 2 x (AO3)	***Max of two main (descriptive AO1) points (odd numbers) on their own with no further explanation*** ***Examiners stamp S in LH margin to show sub max of two AO1 marks (on their own)*** ***Do not accept:*** *Kit is too expensive for children = TV (influence should be on sport/athletes in sport)*

Section B					
Question			Answer	Marks	Guidance
			7. Commerce and sponsors may reflect bad / undesirable image on to the sport (AO1) 8. …because products are unhealthy / undesirable / eg betting web sites / alcohol etc (AO3) (high level sponsorship negative influences) 9. Too much pressure/workload on athletes (to achieve) or too much attention given to the needs of the sponsor or athlete is distracted or lack of freedom/choice for athlete or performers develop deviant behaviour/mental health issues or leads to match fixing (AO1) 10. …because sponsor wants brand to be associated with success (so pressurizes performer) (AO3) 11. Sponsors have too much influence on how sport is played / team selection / rules / timings / breaks to fit adverts (AO1) 12. …because sponsors want their brand advertised effectively/widely/through the media or want the game to be attractive/fast/free flowing (to attract larger audiences) (AO3)		

Section B					
Question			**Answer**	**Marks**	**Guidance**
22	**(a)**		Two marks from: 1. A rugby coach gives a player **(example)** praise/*encouragement* **(positive feedback)** leads to better tackling technique **(improving performance)** 2. A Netball coach tells the goal attack **(example)** that their shooting is excellent **(positive feedback)** and this leads to more consistent shooting accuracy **(improving performance)**	**2** 2 x (AO2)	*Look for descriptions of two **different named** sports situations when **positive feedback** can **improve performance*** *Accept praise twice as the type of positive feedback but the sport and the impact must be different to the first example given* ***Do not accept: example without a named sport eg a coach gives a player praise for a good tackle = 0 marks***
	(b)		Four marks from: Sub max two marks (Knowledge of results) 1. Information/terminal feedback about the end product / outcome of a competition / sports performance or knows how they have done or knowing the score of the game (AO1) 2. E.g The coach tells a sprinter her time for completing the 100m race (AO2) Sub max two marks (Knowledge of performance) 3. Information on technique / tactics / how well the movement/skill has been executed or how well they have played(AO1) 4. E.g The table tennis coach tells her player that her forehand technique lacks adequate top spin (AO2)	**4** 2 x (AO1) 2 x (AO2)	**Do not accept:** Knowing the result or knowing the performance How good the performance is how they are playing (but how well they have played = BOD) **Accept:** any suitable example from sport (even numbers) for each **(Accept examples without naming the sport)** description without practical example (odd numbers) for max of 2 marks

Section B					
Question			Answer	Marks	Guidance
	(c)		Four marks from: Sub max one mark for: (Definition of negative feedback) 1. Information about an unsuccessful performance/ weaknesses / what went wrong / outcome or losing final score or critical information about performance/outcome or destructive information about performance/outcome (AO1) Sub max one mark for: (Example) 2. E.g. A coach telling a tennis player that his last serve showed poor technique or any other suitable example (AO2) Sub max two marks for: (Evaluation) 3. This could spur a player on to better performances or to improve or high-level performers will respond well to criticism or will encourage self-reflection/setting higher targets (AO3) 4. This might result in a lowering of confidence / self-esteem or might embarrass the performer or hurt their pride and therefore will become de-motivated / less motivated (AO3)	**4** 1 x (AO1) 1 x (AO2) 2 x (AO3)	One mark for definition of negative feedback One mark for a suitable practical example (do not have to name the sport) Two marks for evaluation **Do not accept:** (Evaluation) ***This will motivate (motivation is in the question so this should be qualified)*** ***How to improve (pt1)*** ***(but accept de-motivation for pt4)*** ***(for eg) footballer losing heavily = TV*** ***Gymnast seeing poor score for routine = 1 mark***

Section B					
Question			**Answer**	**Marks**	**Guidance**
23	**(a)**	**(i)**	Two marks for: 1. 13.6 (%)	**1** 1 x (AO1) DATA	**Accept:** Calculation without units (units stated in the question)
		(ii)	1. 5.6 (%)	**1** 1 x (AO1) DATA	**Accept:** Calculation without units (units stated in the question)

Section B					
Question			Answer	Marks	Guidance
		(b)	Two marks for two of: **(Boys and girls)** 1. The % of all/boys **and** girls with disorders increases from 5-10 to 11-16 2. The % for boys and girls are similar at age 11 to 16 3. The % for boys in the youngest age group/5 to 10 is much higher/nearly double the % for that group in girls 4. The % of girls aged 17 to 19 is twice as high as the % for boys in the same age group **(girls)** 5. The % for girls aged 17 to 19 is the most / much higher than any other group in either gender 6. The % of girls with disorders increase by age group/with age **(boys)** 7. The % for boys is fairly stable across the age groups 8. The % of cases in boys goes down from the group age 11-16 to 17-19	**2** 2 x (AO3) Quantitive DATA	*Do not accept:* *Candidates' inaccurate groupings eg Boys 14-19 = x* Accept equivalent to % eg more/fewer boys/girls….

Section B				
Question		**Answer**	**Marks**	**Guidance**

Section B				
Question		**Answer**	**Marks**	**Guidance**
23	**(c)***	**Indicative content** ***(Using practical examples from sport, describe the emotional benefits of participating in physical activities).*** 1. **Raising self-esteem or confidence** • KU. Feeling good about yourself having achieved success (AO1) • e.g. winning a tennis match and feeling good about yourself • e.g. finishing an exercise class without stopping and feeling a sense of personal achievement • DEV. Having a higher opinion of yourself / your abilities (AO3) • DEV Having a high/higher level of self-efficacy because of sports/exercise achievements (AO3) • e.g. After scoring a century in cricket feeling that you are a good / the best player **2. Controlling anxiety / managing stress** • KU. Feeling calmer or calming your nerves (AO1) • KU. Managing the stresses of everyday life (AO1) • DEV. Achieving the optimum amount of arousal (AO3) • DEV. Depending on your personality / ability / type	**6** 2 x (AO1) 2 x (AO2) 2 x (AO3)	**Level 3 (5–6 marks)** • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. **Level 2 (3–4 marks)** • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Section B					
Question		Answer		Marks	Guidance
		of task (AO3) • e.g. Playing squash can release tension • e.g. Exercising can help put things into perspective or can help you forget your troubles / stresses **3. Achieve a better self-image** • KU. You feel that you look good (AO1) • KU Lose weight / feel fit • DEV. Can feel that you project an image that others will admire or that you feel is attractive/admired by others (AO3) • e.g. Weight training might lead to a more toned / fit physique • e.g. Playing rugby may lead to others admiring your physicality **4. Feeling happy / joyful or enjoy yourself** • KU. Release of (happy) hormones/endorphins • KU. Exercise / sport non-serious / few (serious) consequences so can enjoy yourself (AO1) • e.g. Playing 5-a-side football after work one evening can be enjoyable • DEV. Different to everyday or working life so can be more relaxed and therefore more fun (AO3) • e.g Playing badminton has none of the pressures of working life and so can enjoy more because there are no personal consequences • DEV. Exercising with others / teamwork / opponents		**Level 1 (1–2 marks)** • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. **(0 marks)** • no response or no response worthy of credit. **Discriminators** • **L3 (5-6 marks):** Both AO2 and AO3 are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed. • Several relevant **practical examples** given for emotional benefits • **Emotional benefits** descriptions developed well • Several developed links between participation **and** diet and **long-term effects on the heart** • **L2 (3-4 marks):** Some success at more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with

Section B					
Question		**Answer**		**Marks**	**Guidance**
		can cause a feeling of group or shared fun/enjoyment or decrease in loneliness (AO3) • e.g. Joining a yoga class can help you share the enjoyment with others, and you become part of a social group ***(Explain how regular participation and a balanced diet often result in positive long-term physical effects on the heart).*** **5. Regular exercise can increase health / fitness of the heart** • KU. Less likely to have disease / illness / (premature) death or less strain on the heart (AO1) • KU. Heart becomes stronger / stronger contractions (AO1) • KU. Bradycardia (AO1) • KU. Hypertrophy of heart (AO1) • DEV Increase in cardiac output / resting stroke volume (AO3) • DEV Decrease in <u>resting</u> heart rate (AO3) • DEV Increase in capillarization (AO3) • KU. Moderate and low intensity is (generally) best type of exercise (AO1) • DEV. Duration / intensity of exercise to improve heart health depends on age/level of fitness/medical conditions (AO3) • KU. Energy expenditure through exercise can help control amount of body fat / levels of cholesterol or avoid overweight / obesity (AO1)		some success = 4 marks). • **At least one effective practic*al ex*ample** included for emotional benefits • ***Maximum of 4 marks with no AO2 points (examples) made*** • More than one **emotional benefit** described and developed • At least one developed link between participation **or** diet and **long-term effects on the heart** • **L1 (1-2 marks):** Responses only demonstrating AO1 knowledge and understanding are Level 1. • Very few, if any, relevant **practical examples** • Benefits other than emotional included • Little or no links made between participation/diet and **long-term effects on the heart** • Give **one** mark if any material creditworthy for emotional benefits or long-term benefits to the heart ***NOTE*** ***Do not give credit for:*** • ***Reduced strokes*** • ***Fitter / healthier heart*** • ***Pumps blood faster*** • ***Lower heart rate*** • ***Lowers blood pressure (vascular)***

Section B					
Question		Answer		Marks	Guidance
		6. **Having a diet that contains the right amount of nutrients increases health of heart** • KU. less likely to experience heart disease/problems • KU. Balance relates to amount of food/nutrients ingested / intake **and** amount of energy expended / output (AO1) • DEV. Vitamins / minerals protects against (heart) disease (AO3) • DEV. Protein helps to build, and repair cells and helps to maintain a healthy heart (AO3) • DEV. The right balance of nutrients guards against obesity / overweight which could cause heart disease / problems (AO3)			

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Oxford Cambridge and RSA Examinations
is a Company Limited by Guarantee
Registered in England
Registered Office; The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA
Registered Company Number: 3484466
OCR is an exempt Charity

OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553

© OCR 2019

OCR
Oxford Cambridge and RSA

Monday 15 November 2021 – Afternoon

GCSE (9–1) Physical Education

J587/01 Physical factors affecting performance

Time allowed: 1 hour

No extra materials are needed.

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*****).
- This document has **16** pages.

ADVICE
- Read each question carefully before you start your answer.

© OCR 2021 [601/8442/5]
DC (PQ/FC) 300691/4
OCR is an exempt Charity

Section A

Answer **all** the questions.

1 Define heart rate.

.....

..... **[1]**

2 **Fig. 2** shows the performance of a gymnastic skill.

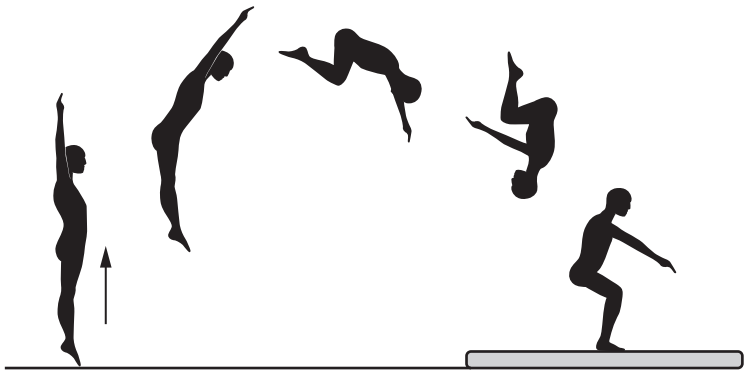


Fig. 2

(a) Name the axis of rotation in **Fig. 2**.

..... **[1]**

(b) If the gymnast completes the same gymnastic move backwards, the axis of rotation remains the same.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

3 Describe the role of the trachea in the respiratory system.

.....

..... **[1]**

© OCR 2021

4 **(a)** Define reaction time.

.....

..... **[1]**

(b) Name a suitable test for reaction time.

..... **[1]**

(c) Describe, using a sporting example, how a fast reaction time may benefit performance.

.....

..... **[1]**

5 **Fig. 5** shows a fitness exercise.

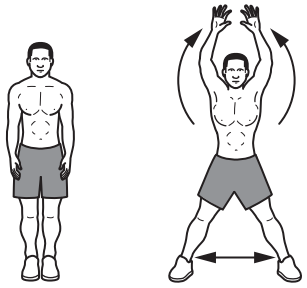


Fig. 5

Name the plane of movement for the exercise shown in **Fig. 5**.

..... **[1]**

6 Stroke volume is:

Put a tick (✓) in the box next to the correct answer.

A The amount of air leaving the lungs in one breath ☐

B The amount of air leaving the lungs in one minute ☐

C The amount of blood leaving the heart in one beat ☐

D The amount of blood leaving the left ventricle in one minute ☐

[1]

© OCR 2021

7 A football player suffers a fracture in the lower leg, above the ankle.

(a) Name **one** bone in the lower leg that may have been fractured.

..... **[1]**

(b) Explain the effect of reversibility on the football player during recovery from the fracture.

.....

..... **[1]**

8 Describe how the sit and reach test is performed to measure flexibility.

.....

.....

.....

..... **[2]**

9 Team sports involve aerobic and anaerobic exercise.

(a) Using a team sport of your choice, describe a sporting example for each.

Team sport: .....

Aerobic exercise: .....

.....

Anaerobic exercise: .....

..... **[2]**

(b) During a training session a games player runs at different speeds and over different gradients.

Name this type of training.

..... **[1]**

© OCR 2021

10 **Fig. 10** shows an image of a dancer performing a pirouette that involves spinning around on one foot.



Fig. 10

A pirouette is a movement around the longitudinal axis.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

11 Explain the main purpose of a badminton player jogging around the court as part of their warm up.

.....

..... **[1]**

© OCR 2021

12 **Fig. 12** shows the legs and feet of a high diver preparing to dive into the water.

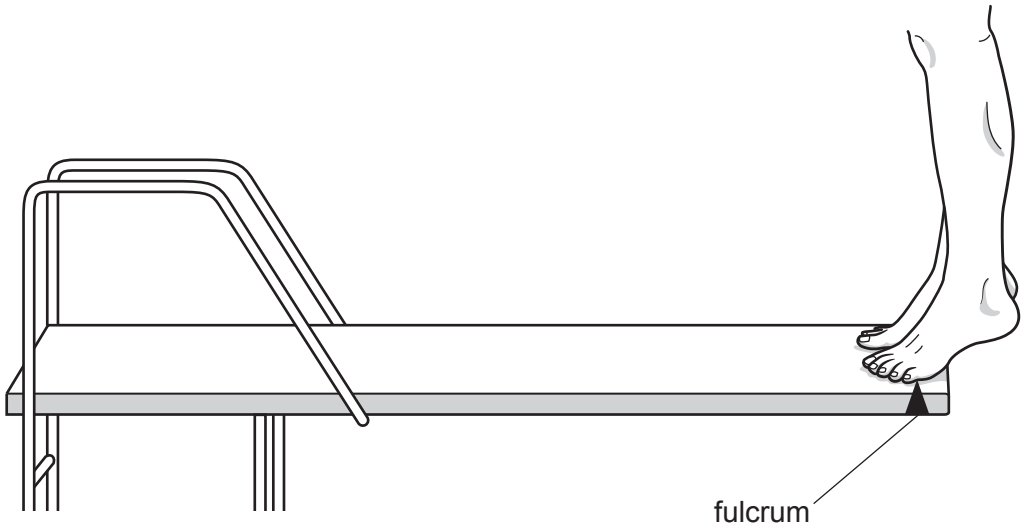


Fig. 12

Draw an arrow on **Fig. 12** to show each of the following:

- the direction of the load.
- the direction of the effort

[2]

13 Describe the role of a fixator muscle.

.....

..... **[1]**

14 Name the fitness component that a hand grip dynamometer tests.

..... **[1]**

15 Which one of the following correctly names the articulating bones in the elbow joint?

Put a tick (✓) in the box next to the correct answer.

A Humerus, biceps, radius ☐

B Humerus, radius, ulna ☐

C Humerus, scapula, ulna ☐

D Radius, carpals, ulna ☐

[1]

© OCR 2021

16 Describe how to lift heavy sporting equipment safely.

.....

.....

.....

..... **[2]**

17 One function of the skeleton is to allow movement so that rugby players can tackle and run with the ball.

Describe how the structure of the skeleton allows movement.

.....

..... **[1]**

18 Name the blood vessel that transports blood from the left ventricle towards the muscles.

..... **[1]**

19 One of the long-term benefits of regular exercise is an increase in aerobic capacity.

(a) What is meant by aerobic capacity?

.....

..... **[1]**

(b) Explain how a high aerobic capacity gives a cyclist a better chance of winning a race.

.....

..... **[1]**

20 Name the part of the body that the vertebrae protect.

..... **[1]**

© OCR 2021

Section B

Answer **all** the questions.

21 (a) Basketball and netball players put a lot of stress on their knees during a match.

Describe, using practical examples from basketball or netball, the role of ligaments, tendons and cartilage at the knee.

Ligaments: .....

.....

.....

.....

Tendons: .....

.....

.....

.....

Cartilage: .....

.....

.....

.....

[6]

(b) Explain the redistribution of blood flow in a basketball or netball player during a match.

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2021

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© OCR 2021

22 (a) **Table 22** shows respiratory rates for hockey players in different playing positions before and during a game.

Stages of the match	Respiratory rate (breaths per minute) Defender	Respiratory rate (breaths per minute) Midfielder	Respiratory rate (breaths per minute) Forward
At rest	12	10	13
After warm up	15	13	16
End of first half	26	28	30
Start of second half	12	10	15
End of second half	30	16	31

Table 22

(i) Analyse the impact of the warm up on the three playing positions.

..... **[1]**

(ii) Which playing position had the largest increase in respiratory rate at the end of the first half?

..... **[1]**

(iii) Explain why every player's respiratory rate was lower at the start of the second half of the game compared to the end of the first half.

.....

..... **[1]**

(iv) Give **one** reason why the respiratory rate of the midfielder was lower at the end of the second half than at the end of the first half.

.....

..... **[1]**

© OCR 2021

(b) Describe **four** long-term benefits that hockey training can have on the respiratory system.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

(c) Describe the effect lactic acid may have on the performance of the hockey players during the game.

.....

.....

.....

..... **[2]**

© OCR 2021

23 (a) A warm up is one way the risk of injury can be minimised before a rugby game.

State **two** other ways a rugby coach can minimise the risk of injury in their players. Give a practical example from rugby for each method.

Way to minimise risk 1: .....

.....

Rugby example 1: .....

.....

Way to minimise risk 2: .....

.....

Rugby example 2: .....

.....

[4]

(b)* A rugby player may use mental preparation techniques as part of their warm up.

Using practical examples, explain the benefits of mental preparation techniques before and during a rugby match.

After the match the coach makes the team do a cool down to speed up the removal of lactic acid from muscles.

Explain other physical benefits of a cool down. **[6]**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

© OCR 2021

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

END OF QUESTION PAPER

© OCR 2021

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2021

© OCR 2021

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© OCR 2021

OCR
Oxford Cambridge and RSA

GCSE (9–1)

Physical Education

J587/01: Physical factors affecting performance

General Certificate of Secondary Education

Mark Scheme for Autumn 2021

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2021

1. Annotations used in the detailed Mark Scheme

Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO1 on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached
BP	Blank page		

- **KU, EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.
- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			One mark for: Number of (heart) beats <u>per minute</u>	**1** 1 x (AO1)	**Do not accept: '**Number of heart beats' on its own = TV
2	**(a)**		One mark for: Transverse	**1** 1 x (AO3)	
2	**(b)**		One mark for: True	**1** 1 x (AO3)	
3			One mark for: Allows passage of air **to** the lungs **OR** connects the mouth / nose / larynx **to** the lungs / bronchi	**1** 1 x (AO1)	**Do not accept:** Windpipe on its own = TV If oxygen stated instead of air - BOD
4	**(a)**		One mark for: The time taken to respond to a stimulus	**1** 1 x (AO1)	**Do not accept: Definitions using the word 'react/reaction, e.g.** Time taken to react to a stimulus = TV
	(b)		One mark for: Ruler (test)	**1** 1 x (AO1)	**Accept:** Batak board and other <u>named</u> online tests
4	**(c)**		One mark for: A sprinter that responds to the gun quicker will have more chance of winning the race / get a better start **OR** the footballer that moves to the ball faster will have more chance of getting there first / beating the defender / scoring a goal	**1** 1 x (AO2)	Answer must show a benefit for performance

Section A					
Question			**Answer**	**Marks**	**Guidance**
5			One mark for: Frontal	**1** 1 x (AO3)	
6			One mark for: **(C)** The amount of blood leaving the heart in one beat	**1** 1 x (AO1)	
7	**(a)**		One mark for: Tibia / fibula	**1** 1 x (AO2)	**Accept:** phonetic spellings of tibia and fibula **Do not accept:** fibia / tibula
7	**(b)**		One mark for: (Reversibility means that) fitness gains will decrease **OR** adaptations will be lost **OR** skill levels decrease (because they are unable to train as much)	**1** 1 x (AO2)	
8			Two marks for two of: 1. Legs need to be straight / knees flat on floor 2. No footwear / bare feet 3. Reach as far forward as possible 4. Move slowly / no bouncing 5. Maintain position for two seconds	**2** 2 x (AO1)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
9	**(a)**		Two marks for: 1. (Aerobic) – Playing a **full** / **whole** game of netball **OR** hockey player **continuously** running up and down the pitch 2. (Anaerobic) – Jumping up to head the ball in football **OR** a rugby player sprinting to score a try	**2** 2 x (AO2)	**Team sport must be named.** **Do not accept:** Playing a game of football / basketball = TV **Do not accept:** Any reference to individual sports such as 100 m sprint for anaerobic (Question asks for team sports) Accept examples of low intensity exercise, e.g. jogging across pitch as BOD
	(b)		One mark for: Fartlek	**1** 1 x (AO1)	
10			One mark for: True	**1** 1 x (AO2)	
11			One mark for: To enable more blood / oxygen to be delivered to the (working) muscle	**1** 1 x (AO2)	**Do not accept:** Raises pulse / heart rate = TV
12			Two marks for: 1. (load) arrow vertical and pointing down 2. (effort) arrow vertical and pointing up	**2** 2 x (AO3)	**Do not accept:** arrows if not correctly labelled load or effort. Arrows must be vertical

Section A					
Question			Answer	Marks	Guidance
13			One mark for: Stabilises joint / body part / limb **OR** assists agonist to work effectively **OR** prevents unintended movements	**1** 1 x (AO1)	
14			One mark for Strength	**1** 1 x (AO1)	
15			One mark for: **(B)** Humerus, radius, ulna	**1** 1 x (AO1)	
16			Two marks for two of: 1. 2 people (minimum) 2. Bend / flex knees (to lift) 3. Keep back straight 4. Communication between lifters / work together	**2** 2 x (AO2)	Look for some indication that the knees have been bent for MP 2, e.g. squat
17			One mark for: Skeleton provides surface for muscles / tendons to attach **OR** lever systems / bones act as levers **OR** skeleton is jointed / has joints	**1** 1 x (AO2)	
18			One mark for: **<u>Aorta</u>**	**1** 1 x (AO1)	Artery = TV

Section A					
Question			**Answer**	**Marks**	**Guidance**
19	**(a)**		One mark for: Ability to take in and use oxygen / ability of (heart and lungs) to get oxygen to the muscles **OR** the ability to continuously exercise without tiring	**1** 1 x (AO1)	**Accept:** cardiovascular endurance / stamina How long you can last doing continuous exercise = TV
	(b)		One mark for: They can **pedal** for longer without getting tired / fatigued or **cycle** at a higher intensity for longer	**1** 1 x (AO2)	Answer must be applied to cycling.
20			One mark for: Spinal cord	**1** 1 x (AO1)	**Accept:** Central nervous system or CNS = BOD

Section B					
Question			Answer	Marks	Guidance
21	(a)		Six marks for: (Ligaments) 1. Connect bone to bone / help stabilise the joint / prevent dislocation / act as shock absorber 2. Help maintain correct technique when jumping for a basketball rebound / helps prevent injury when landing after a jump shot (Tendons) 3. Connect bone to muscle 4. When the muscle contracts this pulls on the bone creating movement to pass the netball / run / move into space on the netball court (Cartilage) 5. Provides protection to bones / shock absorber / prevents bones rubbing together 6. Cushions the joint after landing to block a basketball shot	**6** 3 x (AO1) 3 x (AO2)	**Accept:** Examples within descriptions for sub-max two marks. For example, cartilage protects the bones (Point 5) of a basketball player when running up and down the court (Point 6) = 2 marks sub-max NB: MP 2, 4 and 6 must be applied to basketball or netball to gain credit.
	(b)		Four marks for four of: 1. Vascular shunt (mechanism) 2. Vasodilation of blood vessels to muscles (all muscles in body need more blood so no need for 'working muscles') 3. More blood / oxygen to muscles 4. Vasoconstriction of blood vessels to other / non-essential organs / liver / kidneys / gut 5. Less blood to organs 6. During time-outs / stoppages / substitution / half time 7. Less blood to muscles / more blood to organs	**4** 4 x (AO3)	MP 7 is directly linked to MP 6 and cannot be credited without MP 6

Section B					
Question			**Answer**	**Marks**	**Guidance**
22	**(a)**	**(i)**	One mark for: (Warm up) Increased / raised respiratory rate (by 3 breaths) (for every player)	**1** 1 x (AO3)	'Breathe more' on its own = TV
		(ii)	One mark for: Midfielder	**1** 1 x (AO3)	
		(iii)	One mark for: Half-time so players had **less demand for oxygen**	**1** 1 x (AO3)	'Players were inactive / resting at half time' = TV (this is a description. not an explanation)
		(iv)	One mark for: Injured **OR** defensive role **OR** lack of motivation **OR** change of tactics	**1** 1 x (AO3)	Accept other suitable answers
	(b)		Four marks for four of: 1. Increased efficiency to take in O_2 / to supply O_2 to muscles **OR** more efficient gaseous exchange / diffusion 2. Increased surface area of alveoli 3. Increased capillarisation / capillary density around alveoli 4. **Stronger** respiratory muscles / respiratory muscle hypertrophy 5. Increase in (maximum) pulmonary ventilation / vital capacity 6. Increase in minute volume / minute ventilation 7. Increase in tidal volume 8. Reduced **resting** respiratory rate 9. Decrease in lung disease / healthier lungs	**4** 4 x (AO1)	**Do not accept: '**Stronger muscles' on its own. Respiratory / breathing muscles must be stated or named. 'Increased lung capacity' = BOD 5 'Reduced respiratory rate' = TV

<table>
<tr><td></td><td>(c)</td><td></td><td>Two marks for two of:

1. (Lactic acid) causes fatigue / tiredness
2. Pain / soreness in the muscles
3. Decrease in performance</td><td>2

2 x (AO1)</td><td>Do not accept: cramp

‘Have to take a break’ = TV</td></tr>
<tr><td>23</td><td>(a)</td><td></td><td>Four marks for four of:

<table>
<tr><th>(method)</th><th>(practical example)</th></tr>
<tr><td>1. Wear protective equipment</td><td>2. Gumshield / scrum cap</td></tr>
<tr><td>3. Correct clothing / footwear</td><td>4. Compression wear / studded boots</td></tr>
<tr><td>5. Appropriate level of competition</td><td>6. Ensure rugby players are of same gender / age / experience</td></tr>
<tr><td>7. Teach correct techniques</td><td>8. Teach how to tackle properly / safely</td></tr>
<tr><td>9. Encourage fair play
OR do not promote gamesmanship / violence / aggression</td><td>10. No high / spear tackles
OR substitute players showing aggression</td></tr>
<tr><td>11. Cool down</td><td>12. Low-intensity exercises OR stretching</td></tr>
</table>
</td><td>4

2 x (AO1)

2 x (AO2)</td><td>Practical example must match method.

Accept: Brand names of correct clothing

‘Correct equipment’ = BOD 1 or 3 depending on example</td></tr>
</table>

Level 3 (5–6 marks) • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. **Level 2 (3–4 marks)** • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. **Level 1 (1–2 marks)** • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. **(0 marks)** • no response or no response worthy of credit.	**Level 3 Discriminators** • detailed knowledge & understanding of the benefits of mental preparation techniques and many physical benefits of a cool down • explanations of the benefits of mental preparation techniques and the benefits of a cool down are detailed and supported with relevant examples • AO1, AO2 and AO3 are well covered for Level 3; some imbalance may be present for 5 marks. At 6 marks, all AOs are equally well addressed **Level 2 Discriminators** • satisfactory knowledge & understanding of the benefits of mental preparation techniques and some physical benefits of a cool down • explanations of the benefits of mental preparation techniques and the benefits of a cool down are satisfactory and supported with some relevant examples • evidence of satisfactory coverage of both parts of the question or one part is answered well and the other part shows basic understanding of that topic **Level 1 Discriminators** • basic knowledge & understanding of the benefits of mental preparation techniques and physical benefits of a cool down • limited explanation of the benefits of mental preparation techniques • limited explanation of the physical benefits of a cool down • Responses may be limited to AO1 knowledge and understanding

Q23 (b)* Indicative content

6 marks - 2 x AO1, 2 x AO2, 2 x AO3
AO1 = numbered points & AO2 = bullet points (unless AO3 stated)

Mental Preparation Techniques

1. Imagery (AO1)
- heightens or controls arousal levels (AO3)
  e.g. The player using imagery to keep calm / get in the zone before the game (AO2)

2. Mental rehearsal (AO1)
- allows effective / clear / safe decision making (AO3)
  e.g. The player visualises making tackles (AO2)
- Both imagery/mental rehearsal can speed up reactions (AO3)

3. Selective attention (AO1)
- improves concentration / focus (AO3)
  e.g. The player uses selective attention to concentrate on the upcoming game
  e.g. The player focuses on the ball during a tackle and ignores the crowd (AO2)

4. Positive thinking (AO1)
- increases motivation / confidence / self-awareness (AO3)
  e.g. The player believes they are going to win / play well **OR** telling themselves they are going to make a good tackle or win the ball in the scrum / lineout (AO2)

Physical benefits of a cool down

5. Helping the body's transition back to a resting state (AO1)

6. Gradually lowers heart rate (AO1)
- returns pulse back to resting state (AO1)

7. Gradually lowers temperature (AO1)
- slowly returns body temperature back to normal (AO1)

8. Circulates blood and oxygen (AO1)
- reduces the risk of blood pooling (AO3)
- maintains blood / oxygen flow to muscles that have been working (AO3)

9. Gradually reduces breathing rate (AO1)
- number of breaths taken is slowly reduced (AO1)
- helps reduce feelings of nausea / dizziness (AO3)

10. Increases removal of (other) waste products (AO1)

11. Reduces the risk of muscle soreness and stiffness (AO3)
- less likely to feel aches and pains (AO3)
- delayed onset of muscle soreness (AO3)

12. Aids recovery by stretching muscles (AO1)
- maintenance stretches to return muscle to normal length (AO3)
- lengthening and strengthening muscles for next work-out (AO3)
- reduces risk of damage to joints (AO3)

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Cambridge Assessment

OCR
Oxford Cambridge and RSA

Friday 19 November 2021 – Afternoon

GCSE (9–1) Physical Education

J587/02 Socio-cultural issues and sports psychology

Time allowed: 1 hour

No extra materials are needed.

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Answer **all** the questions.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **16** pages.

ADVICE
- Read each question carefully before you start your answer.

© OCR 2021 [601/8442/5]
DC (MS/FC) 306633/6
OCR is an exempt Charity

Section A

Answer all the questions.

1 Other than social media, identify **one** other type of media that influences the commercialisation of sport.

..... **[1]**

2 Give **two** types of drugs that are used illegally by sports performers to improve sports performance.

1 .....

2 .....
[2]

3 Name **two** continua that are used in the classification of sports skills.

1 .....

2 .....
[2]

4 Describe **two** practical examples that show how a skilful performance in sport may be pre-determined.

1 .....

.....

2 .....

.....
[2]

© OCR 2021

5 An example of gamesmanship in sport is a tennis player shouting 'out' when the opponent's serve was clearly 'in'.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

6 Which **one** of the following is the best example of a cultural reason affecting participation in sport?

Put a tick (✓) in the box next to the correct answer.

A Not enough sporting extracurricular activities followed in school. ☐

B A lack of suitable facilities locally. ☐

C Not having enough money to afford a tennis racket. ☐

D Unable to participate in a marathon because of religious fasting. ☐

[1]

7 Define what is meant by physical fitness.

.....

..... **[1]**

8 Complete the following statement using words from the box below. Each word chosen can only be used once.

Loneliness	Fitness	Obesity	Posture	Social	Confidence	Economic

A physical benefit of following a healthy lifestyle is an increase in ..... and an emotional consequence of following a sedentary lifestyle is a lack of ..... .

A ..... benefit of following a healthy lifestyle is an increased sense of belonging.

[3]

© OCR 2021

9 Which **one** of the following is the best example of a meal that is high in carbohydrates?

Put a tick (✓) in the box next to the correct answer.

A Grilled beef steak with salad ☐

B Fillet of salmon with green beans ☐

C Pasta with tomatoes and spinach ☐

D Broccoli and cheese bake with cabbage ☐

[1]

10 Describe **one** practical example of a sports coach using visual guidance in a specific sport.

.....

.....

..... **[1]**

11 Describe **one** advantage and **one** disadvantage of a sports coach using visual guidance.

Advantage: .....

.....

.....

Disadvantage: .....

.....

.....

[2]

© OCR 2021

12 Give **one** practical example of negative feedback.

.....

..... **[1]**

13 Age can be seen as a limiting factor affecting sports participation, for example a 50 year old male has given up attempting to learn gymnastic skills.

Draw a line from each of the other factors affecting participation in sport to the appropriate practical example.

Age		A male in the UK is less likely to take up skiing due to the lack of natural snow slopes
Discrimination		A young woman is not allowed to join a golf club as only men can be members
Environment		A female has taken up dancing because her father shows a keen interest in dance
Family		A 50 year old male has given up attempting to learn gymnastic skills

[3]

14 Describe **two** different reasons for player violence occurring in sport.

1 .....

.....

.....

2 .....

.....

.....

[2]

© OCR 2021

15 Identify **one** reason why goal setting is used for sports performers.

.....

..... **[1]**

16 What type of guidance is used when a coach physically supports a trampolinist during a somersault?

..... **[1]**

17 Compare knowledge of performance and knowledge of results as types of feedback.

.....

.....

.....

..... **[2]**

18 Give **one** practical example of an activity which requires a high intake of protein by the sports performer.

.....

..... **[1]**

19 Give **one** component of a balanced diet that is particularly important for a marathon runner the day before competition.

..... **[1]**

20 Which **one** of the following is the best example of a physical consequence of following a sedentary lifestyle?

Put a tick (✓) in the box next to the correct answer.

A Less likely to have Type 2 diabetes ☐

B Better body posture ☐

C More likely to be highly stressed ☐

D A decrease in bone density ☐

[1]

© OCR 2021

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© OCR 2021

Section B

Answer all the questions.

21 **Fig. 21** shows some statistics about participation in women's football in the UK. (source FA 2018)

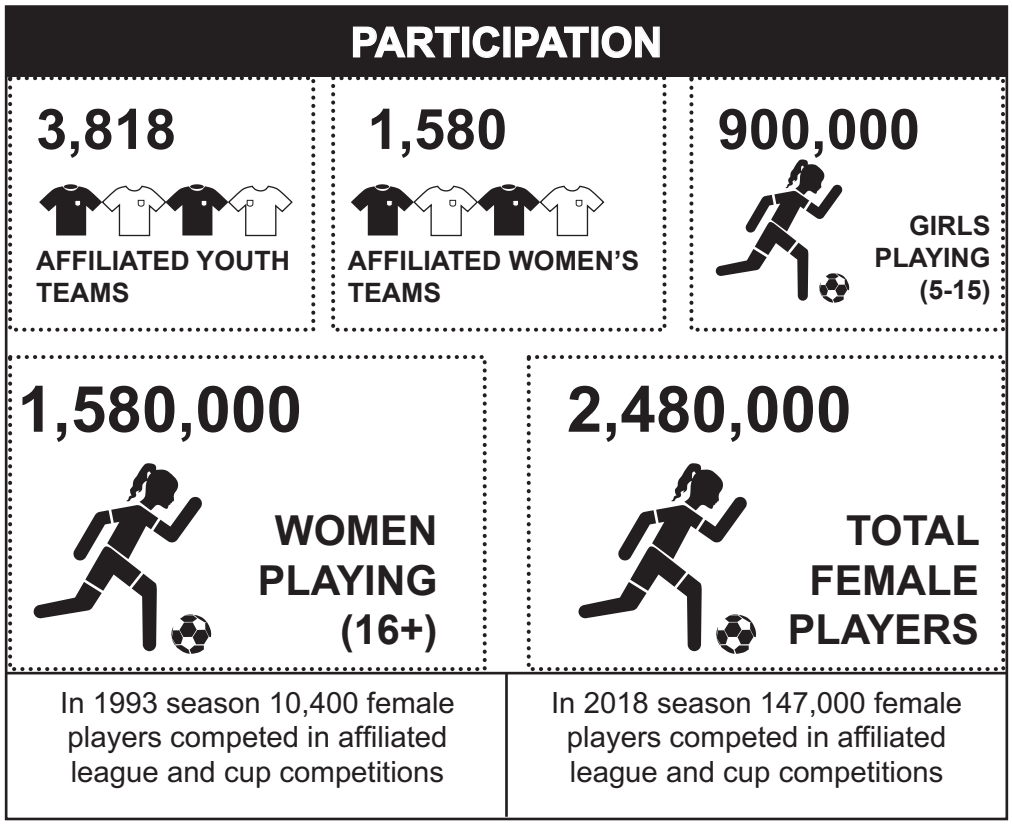


Fig. 21 Participation of female football players in 2018

(a) Using the data in **Fig. 21** and your own knowledge, analyse participation rates in women's football in 2018.

.....

.....

.....

.....

.....

.....

.....

.....

.....

© OCR 2021

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[6]**

(b) Identify **four** factors affecting the participation of females in football.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

© OCR 2021

22 Mental preparation techniques are often used before and during sports performance.

(a) Describe how imagery can be used as a technique by a performer during a sports competition.

.....

.....

.....

..... **[2]**

(b) Use practical examples to explain how mental rehearsal might be used in a sport or activity of your choice.

Sport: .....

Explanation: .....

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2021

(c) 'I will score a goal at some stage during this football match', is an example of positive thinking.

(i) Give a different example of positive thinking for a named sport of your choice.

Sport: .....

Example: .....

.....

[1]

(ii) Explain how positive thinking can help a performer during a sports competition.

.....

.....

.....

.....

..... **[3]**

23 **(a)** Describe **four** emotional benefits of an active lifestyle.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

..... **[4]**

© OCR 2021

(b)* There are consequences and hazards associated with following a sedentary lifestyle or an active lifestyle.

Explain the consequences for physical health of following a sedentary lifestyle.

Describe the potential hazards of using a fitness centre when following an active lifestyle.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[6]**

END OF QUESTION PAPER

© OCR 2021

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2021

© OCR 2021

© OCR 2021

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© OCR 2021

Oxford Cambridge and RSA

GCSE (9–1)

Physical Education

J587/02: Socio-cultural issues and sports psychology

General Certificate of Secondary Education

Mark Scheme for Autumn 2021

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2021

1. Annotations used in the detailed Mark Scheme

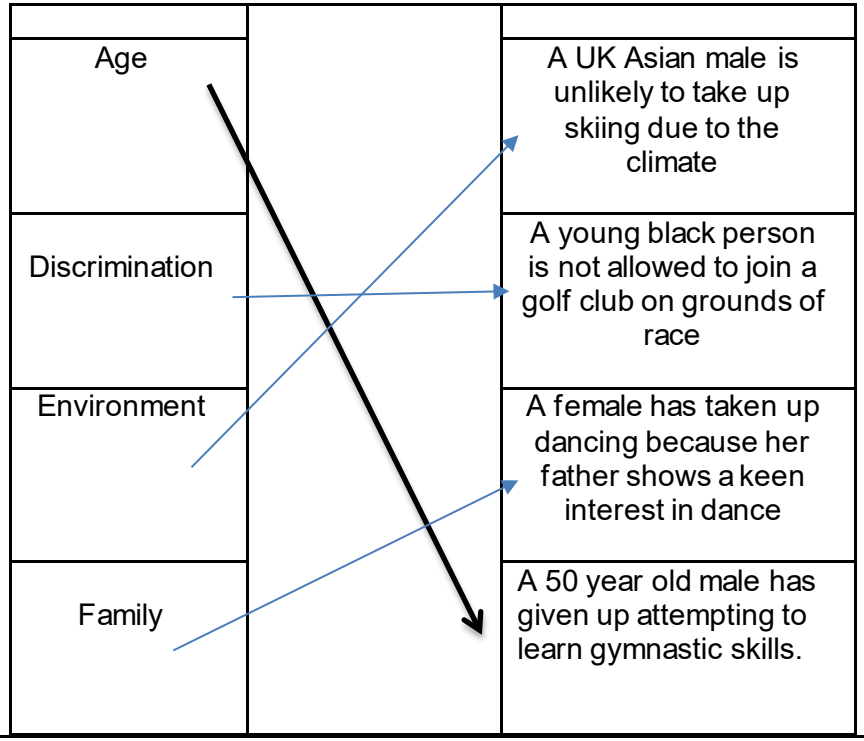
Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO1 on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached
BP	Blank page		

- **KU, EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.
- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			One mark from: 1. Internet or TV or Newspapers or magazines or or radio or films	**1** 1 x (AO1)	**Accept - Any relevant examples of media apart from social media:** **TV - news**
2			Two marks from: 1. (Anabolic) steroids 2. Beta blockers 3. Stimulants 4. EPO 5. HGH	**2** 2 x (AO1)	**Accept - Any relevant examples of illegal drugs See WADA list** **https://www.wada-ama.org/en/resources/science-medicine/prohibited-list-documents**
3			Two marks from: 1. Difficulty (continuum) or simple to complex 2. Environmental (continuum) or open to closed 3. Muscular movement (continuum) or gross to fine 4. Continuity (continuum) or discrete-serial-continuous 5. Pacing (continuum) or externally paced to internally paced 6. Organisation (continuum) or high organisation to low organisation	**2** 2 x (AO1)	Do not accept: Simple or complex/open or closed on their own = TV
4			Two marks from 1. e.g. Knowing where to place the serve in tennis 2. e.g. Deciding where to kick the ball for a football penalty	**2** 2 x (AO2)	**Accept - Any relevant practical examples showing pre-determination in context**

Section A					
Question			**Answer**	**Marks**	**Guidance**
5			One mark for: **True**	**1** 1 x (AO1)	
6			One mark for: **D**	**1** 1 x (AO1)	
7			One mark for: (Fitness) ….is a person's capacity to carry out activity without getting (too) tired/fatigued **OR** being able to cope with the demands of everyday life **OR** how efficient/effective is your body **OR** the ability to function effectively / efficiently **OR** how much work you can do before stopping/getting too tired	**1** 1 x (AO1)	DNA References to health/healthy body or body weight
8			Three marks for: 1. Fitness 2. Confidence 3. Social	**3** 3 x (AO3)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
9			One mark for: **C**	**1** 1 x (AO1)	
10			One mark for: e.g. A gymnastics coach demonstrating a handstand or a tennis coach showing a You Tube clip of an effective serve etc	**1** 1 x (AO2)	**Do not accept:** A practical example without reference to a specific sport (required by the question)
11			Two marks for: (Advantage) 1. Good for novices/learner can (easily) see what is required/ clear /shows exactly what to do **OR** easier to remember or easier to form a technical model or is quick. (Disadvantage) 2. If incorrect then incorrect movements (are learned) **OR** difficult to get the feel/kinaesthetic sense or may be difficult to understand/process.	**2** 2 x (AO1)	**Only accept the first answer given for each** **Do not accept:**
12			One mark for: e.g. a tennis coach telling a player that their grip is <u>incorrect</u> or a football coach shouting to a player that they are playing <u>poorly</u>.	**1** 1 x (AO2)	**Accept any relevant practical example of negative feedback** **Do not accept:** **A response that merely repeats 'negative' with no example**

Section A					
Question			**Answer**	**Marks**	**Guidance**
13			Three marks for:  	**3** 3 x (AO2)	**Do not accept:**
14			Two marks for: 1. An instinctive response or they can't help it or loss of control or getting angry 2. The pressure to win or to win or to gain an (unfair) advantage or pressure from fans / spectators /coaches / fellow players / to gain financial reward	**2** 2 x (AO1)	**Look for description rather than lists** **Do not accept:** **One word answers eg 'retaliation'(must be a description)**

Section A					
Question			**Answer**	**Marks**	**Guidance**
			3. To enhance performance (through channeling) 4. Because of losing or playing poorly or getting frustrated with own performance 5. A reaction to (poor) decisions by officials 6. As retaliation 7. Copying others		
15			One mark for: 1. To improve/optimize performance/focus/concentration or to get better or to win or to show improvement or to measure success **OR** 2. To be motivated or too try hard or to give more effort or to increase enjoyment to control arousal/anxiety **OR** 3. To ensure that they stick to training/ exercise or for exercise/training adherence	**1** 1 x (AO1)	**Do not accept:**
16			One mark for: Manual	**1** 1 x (AO2)	**Do not accept: physical support (in question)**

<table>
<tr><td rowspan="5">17</td><td rowspan="5"></td><td rowspan="5"></td><td>Knowledge of performance</td><td>Knowledge of results</td><td rowspan="5">2

2 x (AO3)</td><td rowspan="5">Accept examples if they show equivalent points to those listed.

Need a valid comparison for each mark (as AO3) –

An odd number point and an even number point are needed for 1 mark

Some may be interchangeable, e.g. 1 and 4 or 5 and 8 could work together as a comparison.

DNA pt 1 - performance</td></tr>
<tr><td>1. is about technique/skill/how something was executed</td><td>2. is about the end product/outcome</td></tr>
<tr><td>3. often intrinsic/something the performer can ‘feel’</td><td>4. more likely to be extrinsic e.g. using times/rankings/ scores</td></tr>
<tr><td>5. often received during or immediately following performance</td><td>6. can be some time after performance</td></tr>
<tr><td>7. likely to be quite specific and immediate/short term</td><td>8. may be judged over longer time period e.g. goals scored in a tournament</td></tr>
<tr><td>18</td><td></td><td></td><td colspan="2">One mark for:

e.g. for weightlifting/ throwing the javelin/ Sprinter</td><td>1

1 x (AO2)</td><td>Mark first answer ONLY

Accept any relevant example that involves mainly strength or power</td></tr>
</table>

					Body building as practical example- BOD 400m runner - BOD Swimmer or athlete is TV (event needs clarification)
19			One mark for: Carbohydrates	**1** 1 x (AO1)	
20			One mark for: **D**	**1** 1 x (AO1)	

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**		Six marks for: 1. More (affiliated) youth teams/clubs than women's teams 2. Approx double / 41% more female youth teams 3. Large number of 5-15/U16/young / school-aged girls play compared to total number of females playing 4. More women play @ 16+ than U16/school-aged 5. Approx 64%/over half of female players are 16+ 6. Approx 1/3/under half/36% of (total) female players are 5-15/school age/U16 7. More females competed in league / cup competitions in 2018 compared to 1993 8. Relatively few females play in competitions in 2018 **OR** the number of females playing in competitions is much/significantly lower than (total) female players in 2018	**1** 2 x (AO2) 4 x (AO3) (inc 3 marks for data interp)	**Do not accept:** eg 3818 youth teams but only 1580 womens teams (must have a qualifying statement rather than data quoted on its own) There are more youth teams than womens teams = pt 1 Comparison to men's football is irrelevant
	(b)		Four marks for: 1. World Cup (2019) 2. Discrimination (from others) / sexism /racism 3. Funding/income 4. Role models 5. (Traditionally) male-dominated sports 6. Awareness of opportunities/information available/media coverage or social media coverage 7. Norms / stereotypes / traditions or cultural norms/religion/ family influences/ expectations / old	**4** 4 x (AO1)	**Do not accept:**

Section B					
Question			Answer	Marks	Guidance
			theories the game is not for ladies 8. Facilities / lack of female teams/clubs 9. Child-care availability 10. Health / pregnancy 11. Age 12. Lack of time		
22	(a)		Two marks for: 1. Creating pictures in the mind/visualising 2. A relaxing (mental) process or to get to feel happy/at peace 3. It is a (cognitive) skill that should be practised/rehearsed	**2** 2 x (AO1)	**Do not accept:** **DNA imagery/imagining 0in answer as RQ**
	(b)		Four marks for: 1. To picture/imagining yourself outside the body (external imagery) (e.g. imagining being in the crowd and watching yourself play tennis) 2. To picture/imagining yourself / doing the activity/ thinking what they can do (internal imagery) (e.g. picturing yourself playing tennis) 3. To think through techniques (e.g. tennis player thinking about the preparation and swing for each stoke) e.g. Scoring 2,3 pointer in basketball 4. To think through strategies / tactics (e.g. tennis player thinks about hitting more shots to the opponent's backhand)	**4** 4 x (AO2)	**Accept any relevant practical example for <u>each point</u> but they should all be linked to the named sport** **The same example throughout is required**

Section B					
Question			Answer	Marks	Guidance
			5. To find a peaceful/quiet place/uninterrupted to carry out the mental rehearsal (e.g. to find a quiet corner of the tennis changing room)		
	(c)	(i)	One mark for: A relevant practical example e.g A netball player thinking that she will do well will help to motivate all her teammates who will try harder to succeed e.g. I am going to hit the ball well and straight off the tee.	**1** **1 x (AO2)**	DNA accept 'scoring in football or scoring a penalty in football ' example needs to be different (ie not football)
		(ii)	Three marks for: 1. increase confidence 2. increase motivation/determination/work harder 3. increase enjoyment 4. control arousal 5. control anxiety 6. increases task adherence/stops giving up 7. improves concentration/stops distractions 8. it can be intimidating/de-motivate opponent	**3** **3 x (AO2)**	**Explanation must be full (see three points below) to score each of the three marks available** • **Thinking of success** • **Link to physical/emotional/social** • **Outcome / play better**

Section B					
Question			**Answer**	**Marks**	**Guidance**
23	**(a)**		Four marks for: 1. Raise self-esteem / e.g. feeling better about themselves playing sport/going to gym. makes feel good 2. Raise self-confidence / e.g. – have more confidence after playing well or making effort to exercise 3. Controls stress/anxiety/worry or gets rid of/channels aggression / e.g. Improved mental health, tackles depression/ feels good/ participating regularly in sport/physical activity as an escape from a stressful job 4. Creates a better (self) image how they look/ e.g. a hockey player feels that she is now fit and has a good body image of herself 5. Gives enjoyment or pleasure or fun or feel happier / e.g. a football player plays each Saturday to have fun and to enjoy the experience 6. Gives a sense of belonging or being part of a team or shared experience / e.g. doing training or fitness or playing sports together with other people	**4** 4 x (AO1)	**Accept examples as equivalent to descriptions if given and accurate/appropriate**

Section B				
Question		**Answer**	**Marks**	**Guidance**
23	**(b)***	**Indicative content** *Explain the consequences affecting physical health by following a sedentary lifestyle.* **(AO3 = numbered points along with bullet points)** 1. Lower life expectancy	**6** 2 x (AO2) 4 x (AO3)	**Level 3 (5–6 marks)** • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification

Section B					
Question		Answer		Marks	Guidance
		• Die earlier • More likely to develop health issues/diseases 2. Unhealthy heart / lungs • more likely to have CHD / heart disease • more likely to have lung disease • heart attacks 3. High blood pressure • More likely to have heart/vascular disease • Strokes 4. More likely to have a decrease in bone density • osteoporosis • Leads to bone disease • More likely to be injured 5. More likely to be overweight / obese • Can result in CHD / stroke • More likely to have joint/muscle problems 6. More likely to contract (Type 2) diabetes • Can result in limb disfunction • Need for insulin • More likely to suffer organ disease 7. Affects posture / leads to poor posture		• accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. **Discriminators** • L3: Both AO2 and AO3 are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed. • At the top of this level responses include many physical health consequences with each point well developed. Many potential hazards are described well with all having good practical application to fitness centres • At the bottom of this level include several physical health consequences with most points well developed. Several potential hazards are described well with most having good practical application to fitness centres **Level 2 (3–4 marks)** • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some

Section B					
Question		Answer		Marks	Guidance
		• Spine deformities • Back ache / problems 8. Poor overall fitness • Organ and muscular diseases • Suffering fatigue *Describe the potential hazards of using a fitness centre when following an active lifestyle.* **(AO2 main points with developments)** 1. Incorrect use of machinery / equipment Poor technique • Lifting weights incorrectly • Can result in injury 2. Damaged/poor quality equipment • Can lead to accidents • Cause incorrect use 3. Crowded environment / not enough space • Equipment not put away/left out • Causes accidents / collisions • Doors / windows left open are also hazards 4. Floor / matting • Wet / slippery surfaces • Damaged matting / floor • Not enough floor covering for protection 5. Lack of supervision • No support in case of accidents • Ne/little support re-equipment use or training programs		accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. **Discriminators** • L2: Some success at more developed AO2 and AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks). • At the top of this level responses include some physical health consequences with some points developed. Some potential hazards are described well with some having practical application to fitness centres • At the bottom of this level include several physical health consequences but mostly undeveloped. A few potential hazards are described well with at least one good practical application to fitness centres. **Level 1 (1–2 marks)** • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an

Section B					
Question		Answer		Marks	Guidance
		6. Over training / over working • Program not suitable to ability / age • Becoming too tired to train correctly 7. Poor lighting / faulty lighting • Leads to poor use of equipment • Collision with other participants 8. Equipment not put away/left out			unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. **Discriminators** • L1: Responses only demonstrating AO2 application Level 1. • At the top of this level responses include at least one physical health consequence little development. At least one potential hazard is described. • At the bottom of this level include at least one health consequence and at least one potential hazard. **(0 marks)** • no response or no response worthy of credit.

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Cambridge Assessment

OCR
Oxford Cambridge and RSA

Tuesday 24 May 2022 – Afternoon

GCSE (9–1) Physical Education

J587/01 Physical factors affecting performance

Time allowed: 1 hour

No extra materials are needed.

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*****).
- This document has **16** pages.

ADVICE
- Read each question carefully before you start your answer.

© OCR 2022 [601/8442/5]
DC (MS/CT) 300787/6
OCR is an exempt Charity

Section A

Answer **all** the questions.

1 Other than sprinting, give an example of an athletic event that is anaerobic.

..... **[1]**

2 **(a)** Name the fitness component that is measured using the 'wall throw' test.

..... **[1]**

(b) Describe a practical example to show the importance of this fitness component in a sport of your choice.

.....

..... **[1]**

3 A weightlifter who performs one repetition of a 50 kg bench press uses muscular endurance.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

© OCR 2022

4 **(a)** Using **Fig. 1**, draw a line through the centre of the body that represents the transverse axis of rotation.

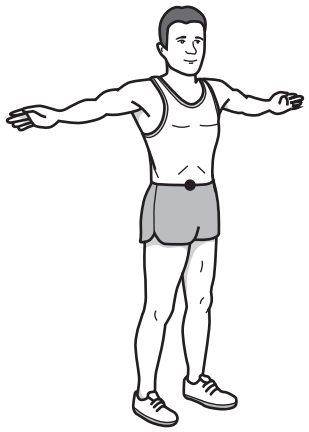


Fig. 1

[1]

(b) Give a practical example from physical activity or sport where movement takes place around the transverse axis of rotation.

..... **[1]**

5 **Fig. 2** shows a diagram of the lungs.

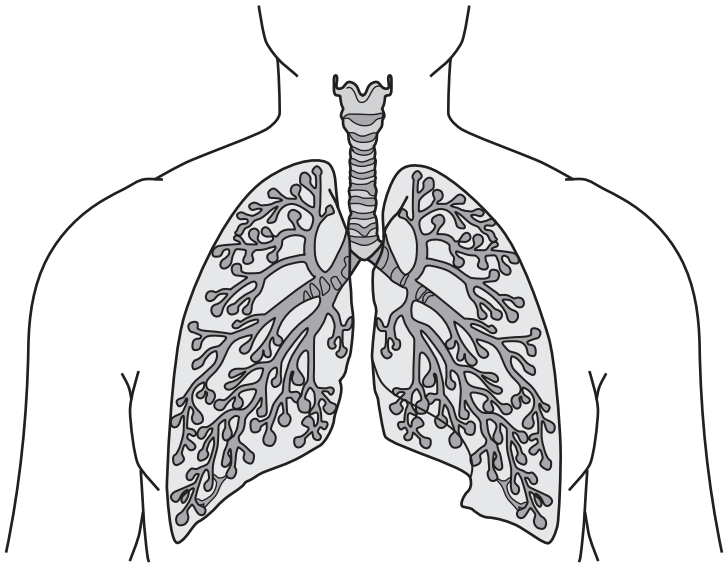


Fig. 2

(a) Draw on **Fig. 2** to indicate the position of the diaphragm during inhalation. **[1]**

(b) Describe the role of the diaphragm during exhalation.

..... **[1]**

© OCR 2022

6 Name the artery that carries deoxygenated blood to the lungs.

..... **[1]**

7 Using **Fig. 3**, state the muscle group **A**.

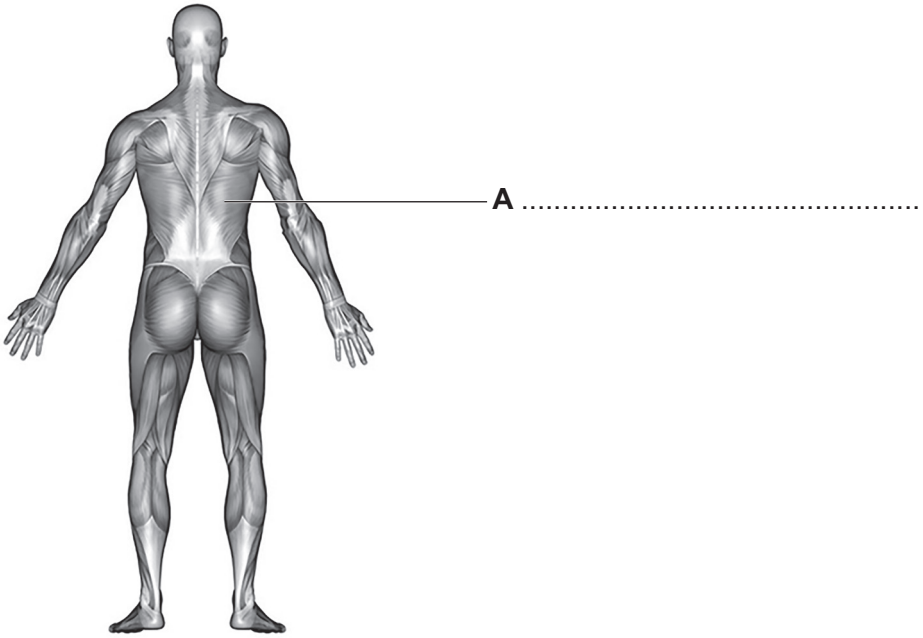


Fig. 3

[1]

8 Other than the surface, identify **one** hazard in an artificial outdoor area.

..... **[1]**

9 Explain how the risk of injury to a performer is reduced by wearing an appropriate type of sports footwear.

Type of footwear: .....

Explanation: .....

.....

.....

.....

[2]

© OCR 2022

10 Which **one** of the following practical examples is **FALSE**?
Put a tick (✓) in the box next to the correct answer.

A The clavicle is an articulating bone at the shoulder when serving in tennis ☐

B A marathon runner can assess their tidal volume by measuring the volume of air that is exhaled per breath ☐

C Bowling in cricket is an example of circumduction at the shoulder ☐

D The nasal passage warms and moistens air breathed in when cycling ☐

[1]

11 Describe the role of the intercostal muscles during expiration.

.....

..... **[1]**

12 **Fig. 4** shows a diagram of the heart.

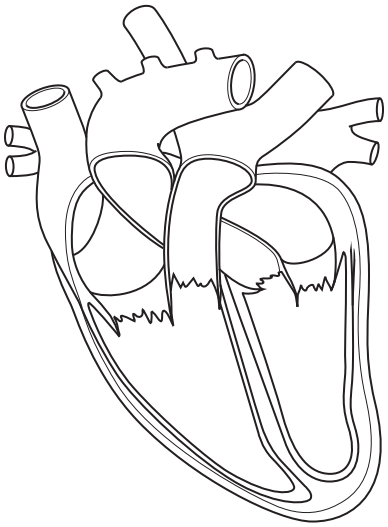


Fig. 4

(a) Using **Fig. 4**, draw an **X** to indicate the location of the bicuspid valve. **[1]**

(b) Valves help prevent the backflow of blood.

The bicuspid valve prevents blood flowing back into which chamber of the heart?

..... **[1]**

© OCR 2022

13 **Fig. 5** shows the performance of a spin by an ice skater.

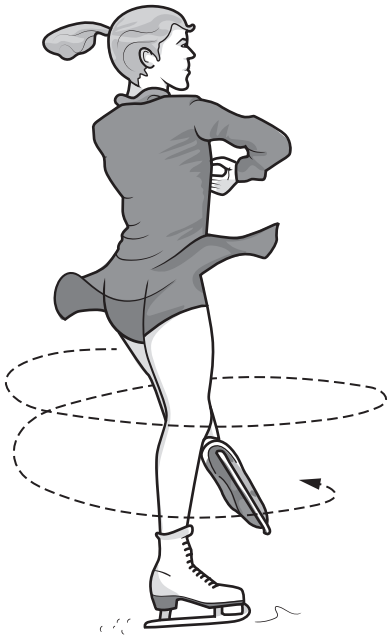


Fig. 5

Complete the following statements using words from the box below:

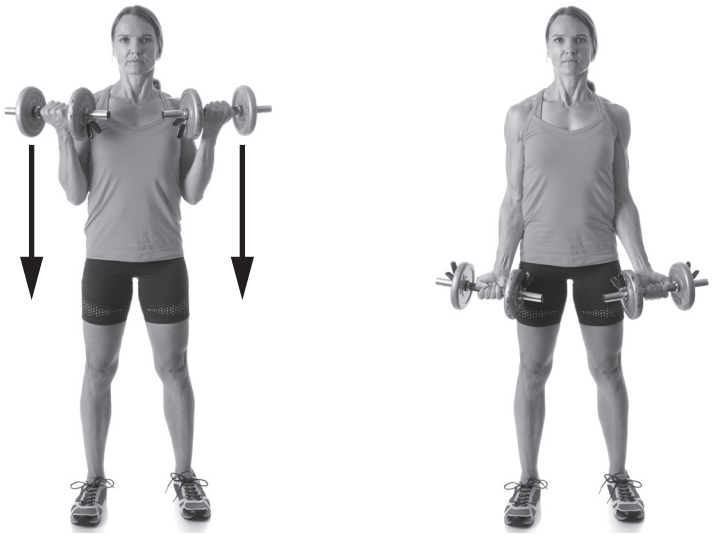
(a) The axis of rotation during the spin is ..... **[1]**

(b) The plane of movement during the spin is ..... **[1]**

Transverse	Frontal	Longitudinal	Sagittal

© OCR 2022

14 **Fig. 6** shows the performance of the downward phase of a weight training exercise.



Before After

Fig. 6

(a) Name **one** agonist and **one** antagonistic muscle used in **Fig. 6** during the downward phase of the exercise.

Agonist: .....

Antagonist: .....

[2]

(b) State the type of movement that occurs at the elbow during the downward phase of the exercise.

..... **[1]**

15 Name the main bone that is protected when a hockey player wears shin pads.

..... **[1]**

16 Which **one** of the following is the correct distance for one shuttle of the multistage fitness test? Put a tick (✓) in the box next to the correct answer.

A 15 m ☐

B 20 m ☐

C 25 m ☐

D 30 m ☐

[1]

© OCR 2022

17 **(a)** Which **one** of the following is the bone that articulates at the hip and the knee?
Put a tick (✓) in the box next to the correct answer.

A Patella ☐

B Tibia ☐

C Fibula ☐

D Femur ☐

[1]

(b) Other than protecting the bones by preventing friction, explain the importance of cartilage when taking part in physical activity.

.....

..... **[1]**

18 Mobility and dynamic movements are components of a warm up.

Give a practical example for each.

Mobility: .....

.....

Dynamic movement: .....

.....

[2]

19 A long-term effect of exercise is hypertrophy of cardiac and skeletal muscle.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

20 At rest, Raheem has a heart rate of 70 bpm and a stroke volume of 80 ml.

Which **one** of the following is Raheem's cardiac output at rest?
Put a tick (✓) in the box next to the correct answer.

A 600 ml / min ☐

B 800 ml / min ☐

C 5 600 ml / min ☐

D 11 200 ml / min ☐

[1]

© OCR 2022

Section B

Answer **all** the questions.

21 **Table 1** shows a set of results for muscular hypertrophy recorded before, half-way through, and at the end of a 6-month specialised training programme.

Name	Biceps (cm)		
	Before	**Halfway**	**After**
Harry	49 cm	51 cm	53 cm
Olivia	22 cm	23 cm	24 cm
Muhammad	33 cm	33 cm	35 cm
Noah	27 cm	30 cm	33 cm
Mia	28 cm	30 cm	29 cm

Table 1

(a) Use the data in **Table 1** to answer the following questions:

(i) Which participant has made the greatest increase in muscle hypertrophy?

..... **[1]**

(ii) Which participant has made the smallest increase in muscle hypertrophy?

..... **[1]**

(iii) Which participant experienced reversibility during their training programme?

..... **[1]**

© OCR 2022

(b) An increase in muscular hypertrophy usually means an increase in muscular strength.

Explain how the long-term benefits of hypertrophy will make Harry's muscles stronger than Olivia's.

.....

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

(c) **(i)** Name the lever system for each of the following examples.

The elbow during a biceps curl: ..... **[1]**

The neck when heading a ball: ..... **[1]**

The take-off foot in the long jump: ..... **[1]**

(ii) Second class levers always give mechanical advantage.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

© OCR 2022

22 (a) (i) **Fig. 7** shows the pathway of air through the respiratory system.

Put the following words in the correct order to complete **Fig. 7**.

Bronchiole

Nose

Bronchi

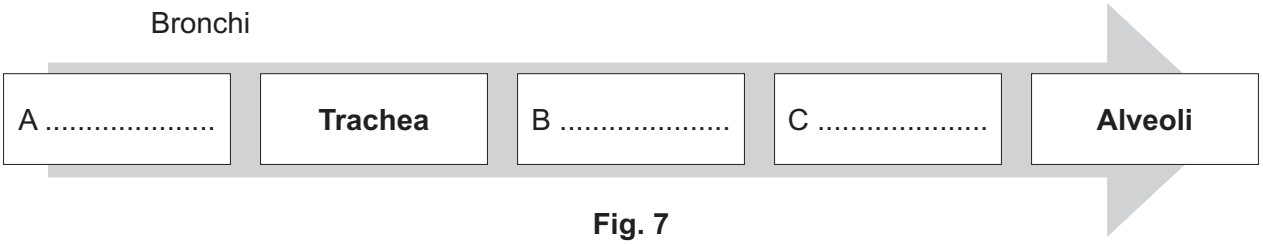


Fig. 7

[1]

(ii) Describe the function of the alveoli.

.....

.....

.....

..... **[2]**

(b) Explain the impact of lactic acid production on the muscles and the quality of performance during a long-distance swim.

.....

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

© OCR 2022

(c) Describe **two** long-term effects of a 6-month training programme on the cardiovascular system.

Explain how these effects can benefit a long-distance swimmer.

Long-term effect 1:

.....

.....

Benefit 1:

.....

.....

Long-term effect 2:

.....

.....

Benefit 2:

.....

.....

[4]

© OCR 2022

23 (a) Complete the table below about ways to minimise the risk of injury when participating in a training session.

Way to minimise risk	Practical example
Wearing correct clothing	1 .....
2	Gentle stretches and breathing exercises
Appropriate level of activity	3 .....
4	Induction programme or supervision during training session

[4]

(b)* Describe **two** different types of training a games player may use as part of their fitness programme.

Explain how different social factors can encourage participants to take part in training programmes to improve their fitness. **[6]**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

© OCR 2022

© OCR 2022

.....

.....

.....

.....

.....

.....

.....

.....

.....

END OF QUESTION PAPER

© OCR 2022

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of Cambridge University Press & Assessment, which is itself a department of the University of Cambridge.

© OCR 2022

GCSE

Physical Education

J587/01: Physical factors affecting performance

General Certificate of Secondary Education

Mark Scheme for June 2022

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2022

MARKING INSTRUCTIONS

PREPARATION FOR MARKING
SCORIS

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: Scoris Assessor Online Training; OCR Essential Guide to Marking.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3. Log-in to scoris and mark the 10 practice responses ("scripts") and the 10 standardisation responses

YOU MUST MARK 10 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the Scoris 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone, the Scoris messaging system or email.

5. Work crossed out:
   a. where a candidate crosses out an answer and provides an alternative response, the crossed out response is not marked and gains no marks
   b. if a candidate crosses out an answer to a whole question and makes no second attempt, and if the inclusion of the answer does not cause a rubric infringement, the assessor should attempt to mark the crossed out answer and award marks appropriately.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add a tick to confirm that the work has been seen.
7. There is a NR (No Response) option. Award NR (No Response)
   - if there is nothing written at all in the answer space

- OR if there is a comment which does not in any way relate to the question (e.g. 'can't do', 'don't know')
- OR if there is a mark (e.g. a dash, a question mark) which isn't an attempt at the question

Note: Award 0 marks - for an attempt that earns no credit (including copying out the question)

8. The scoris **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**

If you have any questions or comments for your team leader, use the phone, the scoris messaging system, or e-mail.

9. Assistant Examiners will send a brief report on the performance of candidates to your Team Leader (Supervisor) by the end of the marking period. The Assistant Examiner's Report Form (AERF) can be found on the RM Cambridge Assessment Support Portal (and for traditional marking it is in the Instructions for Examiners). Your report should contain notes on particular strength displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10. For answers marked by levels of response:
    a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
    b. **To determine the mark within the level**, consider the following:

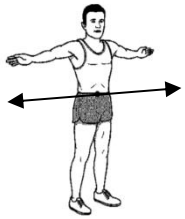
Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

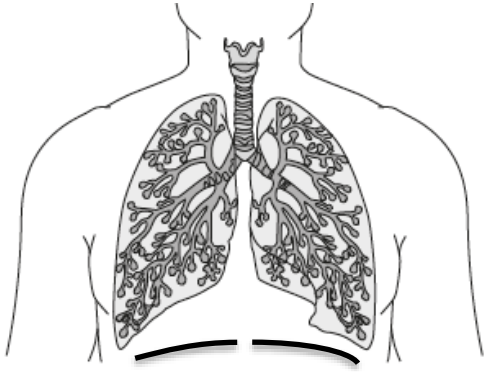
11. Annotations used in the detailed Mark Scheme

BP	BP	Blank page (for any page with no candidate writing on it)
BOD	BOD	Benefit of doubt (must be accompanied by a tick)
	Cross	Incorrect answers only
L1	L1	Level 1
L2	L2	Level 2
L3	L3	Level 3
REP	REP	Repeat
	Tick	Correct
TV	TV	Vague
SEEN	SEEN	Noted but no credit given OR no response
S	S	S (indicates 'sub max reached')
EG	EG	Example
K	KU	Knowledge
DEV	DEV	Development

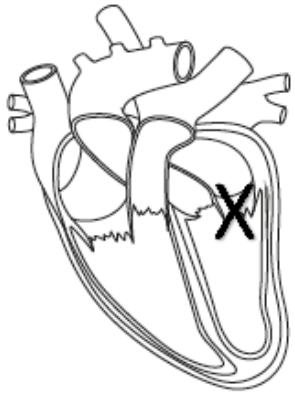
- **KU**, **EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made. On this extended response question, one KU, EG or DEV does not necessarily equate to one mark being awarded. The marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			One mark for: long / triple / high jump **OR** javelin / discus / shot / hammer **OR** pole vault **OR** sprint hurdles/hurdles	**1** 1 x AO2	Answers must be athletic events, not swimming! **Do not accept** 100m/200m/400m **OR** any running event longer than 400m.
2	**(a)**		One mark for: **Coordination**	**1** 1 x AO1	
	(b)		One mark for: moving different limbs/body parts to make a tackle in football **OR** running **AND** passing a football **OR** use hands **AND** eyes to catch the ball in cricket **OR** putting a racket in the right place to hit the ball	**1** 1 x AO2	**Answers must be applied to a <u>named skill</u> in sport AND describe an example of coordination** Definitions of coordination: • moving different limbs at the same time • using different body parts together accurately • doing more than one task at a time effectively • making a decision and putting it into action • repeating a sequence of movements fluently If named position in game but no sport (e.g. goalkeeper) and correct description of example (e.g. diving) = BOD **Do not accept** skill/sport named on its own, e.g. pass in football. Use both feet to score in football = TV
3			One mark for: False	**1** 1 x AO2	

Section A					
Question			**Answer**	**Marks**	**Guidance**
4	**(a)**		One mark for: 	**1** 1 x AO1	Axis must pass through centre of body and match the direction that the arms are pointing on fig. 1 Arrowheads not required Horizontal line = BOD If more than 1 line and it is unclear which line the candidate wants you to mark = TV
	(b)		One mark for: Somersault **OR** forward/backward roll **OR** kicking a ball **OR** front/back flip **OR** chest pass	**1** 1 x AO3	**Accept** any correct movements that involve flexion/extension **Do not accept** named sports, e.g., gymnastics **OR** practical examples that include movements around **other axes**, e.g. golf swing, tennis shots, bowling in cricket = TV 'flip' on its own = TV

5	**(a)**		One mark for:  Fig. 2	**1** 1 x AO1	Diaphragm must appear flat/almost flat. Ovals/circular shapes = BOD if flattish There should be space between diaphragm and lungs (as in picture) **Do not accept** a diaphragm that appears to be in a dome shape (question states inhalation) Use of arrows = TV (unless drawn image is correct)
	(b)		One mark for: Relaxes **OR** goes into a dome shape / domes **OR** move upwards	**1** 1 x AO1	**Do not accept** relaxes and goes down (contradictory) = TV
6			One mark for: **Pulmonary** (artery)	**1** 1 x AO1	
7			One mark for: Latissimus dorsi	**1** 1 x AO1	**Accept** phonetic spellings of latissimus dorsi **Do not accept:** Lats = TV
8			One mark for: Advertising boards / fencing / litter / goalposts / other players / weather / poor lighting / inappropriate footwear / lack of supervision / damaged equipment	**1** 1 x AO1	Mark first response only **Accept** other suitable hazards Loose / left out equipment = BOD **Do not accept** references to pitch / surface / ground / floor, e.g., surface is wet or slippery (in question)

9			Two marks for explanation (one mark for feature of footwear and one mark for how this feature reduces risk of injury): 1. (feature) surface of sole/studs/spikes (how risk is reduced) reduce slipping / gives more grip 2. (feature) sturdy sides of footwear / high tops / lace ups (how risk is reduced) help prevent **ankle / foot** injuries 3. (feature) (gel/cushioned) insoles / bubbles / air pockets / arches (how risk is reduced) cushion feet / knees **OR** act as shock absorbers for the feet / knees 4. (feature) correct-fitting shoes (how risk is reduced) reduce risk of blisters	**2** 2 x AO2	Types of footwear include (no mark for type): Trainers / football boots / astros / rock climbing shoes / tennis shoes / basketball shoes 'Gripped tennis shoes' = BOD 1
10			One mark for: **(A)** The clavicle is an articulating bone at the shoulder when serving in tennis	**1** 1 x AO3	
11			One mark for: (Intercostal muscles) relax **OR** allow ribs/rib cage to move down/in **OR** Pull ribs down/in'	**1** 1 x AO1	**Accept** Contract to move ribs inwards' = BOD **Do not accept** lungs relax **OR** ribs relax **OR** relax and contract 'They move down to release pressure' = TV

12	**(a)**		One mark for:  Fig. 4	**1** 1 x AO1	Note: bicuspid valve lies between the left atrium and left ventricle **Do not accept** X between left ventricle and aorta as this is the aortic pulmonary valve Look for very small X somewhere on heart before giving NR
	(b)		One mark for: **Left** atrium	**1** 1 x AO2	**Do not accept** Atrium on its own
13	**(a)**		One mark for: **Longitudinal**	**1** 1 x AO3	
13	**(b)**		One mark for: **Transverse**	**1** 1 x AO3	
14	**(a)**		Two marks for (in any order): **1. Triceps** **2. Biceps**	**2** 2 x AO2	
	(b)		One mark for: **Extension**	**1** 1 x AO3	

15			One mark for: **Tibia**	**1** 1 x AO1	**Do not accept** Tibula, fibia, shin bone **Accept** phonetic spellings of tibia
16			One mark for: **(B)** 20m	**1** 1 x AO1	
17	**(a)**		One mark for: **(D)** Femur	**1** 1 x AO1	
	(b)		One mark for: Acts as a shock absorber **OR** cushions impact **OR** softens landing **OR** support the joint **OR** allows (some) flexibility at the joint **OR aids** movement at the joint **OR** helps to connect bones (at cartilaginous joints) **OR** keeps airways / nostrils open	**1** 1 x AO2	**Do not accept** protecting bones or friction or equivalent (e.g., wear and tear) (in question) **OR** one-word answers, e.g., support (explanation needed) Connects bones and muscles together = TV Prevents dislocation = TV
18			Two marks for: (Mobility) e.g. arm swings **OR** hip circles **OR** ankle rotations **OR** open / close the gate **OR** heel flicks **OR** high knees **OR** lunges (Dynamic movement) e.g. shuttle runs / zig zag runs / running in and out of cones	**2** 2 x AO2	Dynamic movement must suggest speed **and** changes of direction **Accept** other suitable warm up exercises if in the correct context Agility runs = BOD **Do not accept** Agility ladders on its own = TV
19			One mark for: **True**	**1** 1 x AO1	
20			One mark for: **(C)** 5600ml	**1** 1 x AO3	

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**	**(i)**	One mark for: **Noah**	**1** 1 x AO3	
	(a)	**(ii)**	One mark for: **Mia**	**1** 1 x AO3	
	(a)	**(iii)**	One mark for: **Mia**	**1** 1 x AO3	
21	**(b)**		Three marks from three of: 1. Increased muscle **mass OR** Increased size of muscle **fibres OR** more muscle **fibres** 2. greater speed (of contraction) 3. greater muscular endurance **OR** able to work for longer **OR** less prone to fatigue **OR** train for longer 4. greater flexibility **OR** able to stretch further **OR** increased elasticity 5. greater tolerance to lactic acid 6. faster rate of removal of lactic acid 7. greater potential for energy production 8. larger size / number **of mitochondria** 9. Increased stores of glycogen / PC 10. more capillaries / more oxygen / more blood (to muscles) 11. less prone to injury / faster recovery from injury / quicker recovery rate / repair faster	**3** 3 x AO3	If candidate writes 'Olivia has less strength because …' then credit opposites of 1-11 Reduced build-up of lactic acid = BOD 6 Prevent build-up of lactic acid = TV **Do not accept** Muscular hypertrophy **OR** muscles get bigger/grow **OR** increase in strength/force/power

Section B					
	(c)	**(i)**	Three marks for: (The elbow during a biceps curl) = 3rd (class) (The neck when heading a ball) = 1st (class) (The take-off foot in the long jump) = 2nd (class)	**3** 3 x AO3	**Accept** 'class 3', etc. Number on its own as BOD
	(c)	**(ii)**	One mark for: **True**	**1** 1 x AO1	
22	**(a)**	**(i)**	One mark for: Nose – bronchi – bronchiole **OR** A = nose **AND** B = bronchi **AND** C = bronchiole	**1** 1 x AO1	One tick ONLY by (C) bronchiole for all 3 in correct order otherwise no marks
	(a)	**(ii)**	Two marks for two of: 1. Allows gaseous exchange / diffusion into blood 2. **Oxygen** / carbon dioxide diffuses 3. **Oxygen** diffuses **/** into blood / capillaries 4. **Carbon dioxide** from blood / capillaries **OR carbon dioxide** into alveoli	**2** 2 x AO1	**Do not accept** air enters alveoli (in question)

	(b)		Three marks for three of: 1. Causes pain / soreness / discomfort / aches 2. (Lack of oxygen) Causes **fatigue** (in the muscles) 3. Leads to a poorer swimming technique / reduced quality **OR** decreased performance **OR** muscles do not move as freely 4. Causes the performer to slow down / reduce speed / stop	**3** 3 x AO2	Fatigue on its own = ✓ (muscles implied as mentioned in question) Tiredness / tiring on its own = BOD 2 unable to maintain intensity = BOD 3 less effective / efficient = BOD 3 **Do not accept** causes cramp **OR** references to recovery Affects swimmer's performance = TV Causes oxygen debt = TV Delayed onset muscle soreness = TV Stiffness / weakens muscles = TV

<table>
<tr>
<td></td>
<td>(c)</td>
<td></td>
<td>
Four marks for four of:

(long-term effects on cardiovascular system (sub-max. 2 marks)

1. Lower resting heart rate OR bradycardia
2. The heart becomes larger OR hypertrophy of the heart
3. The heart becomes stronger OR stronger contractions of heart
4. Increase in stroke volume OR more blood pumped from the heart in one beat
5. Increase in cardiac output OR more blood ejected from left ventricle in one minute
6. (Increased) capillarisation
7. More efficient vascular shunt mechanism
8. Lower blood pressure
9. Increase in red blood cells
10. Decrease in blood viscosity

(benefits for a long-distance swimmer (sub-max. 2 marks)

<table>
<tr><td>11. Increased stamina / cardiovascular endurance / VO_2 max / swim for longer</td><td>valid for all effects</td></tr>
<tr><td>12. Reduces how hard the heart must work OR heart rate returns to rest quicker after exercise</td><td>valid for all effects</td></tr>
<tr><td>13. More oxygen / (oxygenated) blood to (working) muscles / heart OR Increased efficiency of blood to working muscles OR faster removal of waste products (from muscles)</td><td>valid for 2, 3, 4, 5, 6, 7, 9, 10</td></tr>
<tr><td>14. reduced risk of CHD</td><td>valid for 1, 2, 3, 4, 5, 8, 10</td></tr>
</table>
</td>
<td>
4

2 x AO1

2 x AO2
</td>
<td>
Benefit must be specific to the long-term effect to gain credit (see table).

Do not accept effects listed as benefits.

If effect would not get a mark do not credit benefit.

The same benefit may apply to two different effects.

Accept: benefits as effects.
The explanation must be different but can be part of the same MP E.g., Effect – increased stamina, benefit – swim for longer = 2 marks (both MP 11)

(Cardiovascular) hypertrophy = BOD 2
Less likely to fatigue = BOD 11

Do not accept long-term effects on skeletal, muscular or respiratory systems

Lower heart rate = TV
Faster speed of blood to muscles = TV
</td>
</tr>
</table>

23	**(a)**		Four marks for: 1. Warm / waterproof / outdoor **clothing OR** clothing that prevents heatstroke / sunburn 2. Warm up **OR** cool down 3. Make sure you are fit enough **OR** have good techniques to play football **OR** same weight / age / gender categories 4. Lifting / using equipment safely **OR** use **correct** techniques **OR** trainer / coach / spotter **being present**	**4** 2 x AO1 2 x AO2	**Accept** other suitable practical examples for MP 1 and 3 but answers must show how they **minimise the risk of injury** Running shorts reduce blisters / friction = BOD 1 Do a risk assessment = BOD 4 **Do not accept** footwear / protective equipment / wear running shorts / avoid baggy clothing = TV 1 Having a coach / supervision / appropriate equipment / exercise = TV 4

Level 3 (5–6 marks)
- detailed knowledge & understanding
- clear and consistent practical application of knowledge & understanding
- effective analysis/evaluation and/or discussion/explanation/development
- relevant information drawn upon from other areas of the specification
- accurate use of technical and specialist vocabulary
- there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

Level 2 (3–4 marks)
- satisfactory knowledge & understanding
- some success in practical application of knowledge & understanding
- analysis/ evaluation and/or discussion/explanation/development attempted with some success
- some relevant information drawn from other areas of the specification
- technical and specialist vocabulary used with some accuracy
- there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Level 1 (1–2 marks)
- basic knowledge & understanding
- little or no attempt at practical application of knowledge & understanding
- little or no attempt to analyse/ evaluate and/or discuss/explain/develop
- little or no relevant information drawn from other areas of the specification
- technical and specialist vocabulary used with limited success
- the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.

(0 marks)
- no response or no response worthy of credit.

Highlight type of training and social factors
Annotate best 2 types of training ONLY with KU, EG and DEV
AO1 = KU = bullets; AO2 = EG = examples; AO3 are stated = DEV
Social factors must be explained in terms of encouraging participation.
Do not credit opposites

Level 3 Discriminators
- detailed knowledge & understanding **two** types of training (AO1 / AO2)
- several social factors that can encourage participation are explained and applied to training (AO3)
- both types of training and social factors that encourage participation are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed.

Level 2 Discriminators
- satisfactory knowledge & understanding **two** types of training (AO1/ AO2)
- social factors that can encourage participation may be **explained** (AO3)
- There may be some attempt to apply social factors to training (AO2)
- some success at more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks)

Level 1 Discriminators
- basic knowledge & understanding of types of training (AO1 / AO2)
- social factor(s) that can encourage participation may be **identified** with little development (AO3)
- the information is basic and communicated in an unstructured way
- responses only demonstrating AO1 knowledge and understanding are Level 1

6 marks in total 2 x AO1, 2 x AO2, 2 x AO3

Q23 (b)* Indicative content: **<u>Types of training for AO1</u>** <u>(award from bullets)</u> **<u>and AO2</u>** <u>(award from e.g.)</u>

1. Circuit training
- Series of exercises or stations arranged in a particular order
- (stations / exercises) target different muscle groups
- Involves sets / repetitions and periods of rest
- Can use the body as resistance or use of weights

(e.g.) 30 seconds work and 30 seconds rest, press up to sit up or sport related activities

2. Weight training
- Involves lifting of free weights / machines or pulleys
- Involves sets / repetitions and periods of rest
- High resistance **AND** low reps for strength
- lower resistance **AND** more reps for endurance / speed

(e.g.) leg press, bench press or 3 sets of 10 reps

3. Plyometrics
- Involves muscles work concentrically **AND** eccentrically
- Involves stretching **AND** contracting muscles
- Involves sets / repetitions and periods of rest

(e.g.) bounding, hopping, jumping (on and off boxes), depth jumping

4. HIIT / High Intensity Interval Training / Interval training
- The higher the intensity the shorter the work period
- Repeated periods of high intensity work and recovery periods
- Recovery period is equal or longer than the work interval

(e.g.) sprinting / cycling for short bursts for 30 seconds

5. Continuous training
- Steady-state training **OR** training with no changes of intensity
- Low – moderate intensity level **OR** aerobic exercise

(e.g.) running / swimming / cycling for more than 20 minutes

6.Fartlek training / speed play
- Continuous / steady state / aerobic exercise **AND** higher intensity bursts
- Over different surfaces / gradients / up and down hill

(e.g.) road / hill running / jogging with fast sprints

<u>Social factors for AO3</u> <u>(award from bullets)</u>

7. Education
- schools teach benefits of physical fitness
- opportunities in schools / shared facilities / community use

8. Self-esteem / self-confidence
- High self-esteem encourages participation and to try new training methods
- Less worried about body image / making mistakes

9. Media coverage / role models
- More role models / media coverage for benefits of training

10. Family / friends / peers
- Encouraged by family / friends who are members of fitness clubs
- Loneliness / wanting to meet people may encourage joining a gym

11. Age
- Importance of fitness for all ages
- Older people may have more opportunities to take part

12. Gender
- Single-sex sessions encourage participation
- Lots of opportunities for males **OR** focus on increasing opportunities for females **OR** more female sports teams / leagues

13. Time / work commitments / opportunity / access
- Having enough free time to train regularly
- More flexible working hours

15. Cost / disposable income
- Having enough money means increased opportunity to participate
- reduced joining fees are available for some groups

15. Disability / discrimination / religion / culture
- Improved access / opportunity / esteem

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on

01223 553998

Alternatively, you can email us on

support@ocr.org.uk

For more information visit

ocr.org.uk/qualifications/resource-finder

ocr.org.uk

Twitter/ocrexams

/ocrexams

/company/ocr

/ocrexams

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT

OCR is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored. © OCR 2022 Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA.

Registered company number 3484466. OCR is an exempt charity.

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up-to-date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please contact us.

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our Expression of Interest form.

Please get in touch if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.

OCR
Oxford Cambridge and RSA

Friday 10 June 2022 – Afternoon

GCSE (9–1) Physical Education

J587/02 Socio-cultural issues and sports psychology

Time allowed: 1 hour

No extra materials are needed.

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **16** pages.

ADVICE
- Read each question carefully before you start your answer.

© OCR 2022 [601/8442/5]
DC (ST) 301198/4
OCR is an exempt Charity

Section A

Answer **all** the questions.

1 Identify **one** type of media used to promote sport.

..... **[1]**

2 Sam is 14 years of age.

Give **two** different ways that Sam's age could affect participation in sport and physical activity.

1 .....

.....

2 .....

.....

[2]

3 Which **one** of the following statements related to participation in physical activity in the UK is correct?

Put a tick (✓) in the box next to the correct answer.

A Men are more likely to participate in physical activity than women. ☐

B Participation rates in physical activity generally increase with age. ☐

C The most popular physical activities are team sports. ☐

D The unemployed are likely to be the most physically active. ☐

[1]

4 A netball club that prevents men from participating is an example of discrimination.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

© OCR 2022

5 Describe **three** different ways that family can promote participation in sport or physical activity.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

6 Which **one** of the following statements is **not** an example of deviance in sport?

Put a tick (✓) in the box next to the correct answer.

A Making illegal tackles in rugby to prevent an opponent from scoring a try. ☐

B Recording incorrect scores during a golf match. ☐

C Refusing to shake hands with officials after a hockey match. ☐

D Taking beta blockers to calm nerves before a diving competition. ☐

[1]

7 Suggest **one** reason why a player may use violence in sport.

..... **[1]**

8 Describe **one** positive effect of anabolic steroids on a sports performer.

Positive effect .....

..... **[1]**

© OCR 2022

9 Many coaches use the SMART principle of goal setting to motivate performers.

Describe how making goals measurable and recorded can help motivate a 100 m sprinter.

Measurable: .....

.....

Recorded: .....

.....

[2]

10 An example of selective attention is when a basketball player blocks out the distractions of the crowd when taking a free throw.

Is this statement true or false? Draw a circle around your answer.

True **False**

[1]

11 One example of positive feedback is a coach telling a javelin thrower their technique was correct.

Draw a line from each of the other types of feedback to the most suitable practical example.

Type of feedback		Practical example
Positive		A golfer hearing the crowd cheer when their long shot hits the flag.
Negative		A gymnast sensing their handstand is good because of the feelings in their muscles.
Intrinsic		A coach telling a badminton player that their smash needs more power.
Extrinsic		A coach telling a javelin thrower their technique was correct.

[3]

© OCR 2022

12 Explain why running is classified as a simple skill on the difficulty continuum.

.....

..... **[1]**

13 Describe the meaning of the following terms when applied to a dance routine.

Aesthetic: .....

.....

Fluent: .....

.....

[2]

14 Which **one** of the following skills would be classified as the most open skill on the environmental continuum?

Put a tick (✓) in the box next to the correct answer.

A A basketball player dribbling past defenders. ☐

B A gymnast performing a floor routine. ☐

C A hockey player taking a penalty stroke. ☐

D A volleyball player making a serve. ☐

[1]

15 Name a food that is a good source of carbohydrate and name a different food that is a good source of protein.

Carbohydrate: .....

.....

Protein: .....

.....

[2]

© OCR 2022

16 Define the term fitness.

.....

..... **[1]**

17 Poor posture and an increased risk of heart disease can be physical consequences of a sedentary lifestyle.

Give **two** other physical consequences of a sedentary lifestyle.

1 .....

.....

2 .....

.....

[2]

18 Give **two** emotional benefits of physical activity.

1 .....

.....

2 .....

.....

[2]

19 Define the term a balanced diet.

.....

..... **[1]**

20 Complete the following definition which relates to the commercialisation of sport.

The golden triangle shows the relationship between sport, ... and

..... .

[1]

© OCR 2022

Section B

Answer **all** the questions.

21 **Table 21** shows the percentage of junior and secondary school children taking part in physical activities (Active Lives survey 5/12/2019 – Sport England).

Activity type	Junior School Years 3–6 (ages 7–11)		Secondary School Years 7–11 (ages 11–16)	
	2019	2018	2019	2018
Team sports	68%	63%	63%	60%
Swimming activities	31%	29%	14%	13%
Active play and informal activities	72%	67%	49%	44%

Table 21

(a) Using **Table 21**, assess the different trends and patterns of participation in physical activity by children.

.....

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

© OCR 2022

(b) (i) Describe **two** ways to increase participation for children in physical activities by improving provision.

1 .....

.....

2 .....

.....

[2]

(ii) Describe **two** ways to increase participation for children in physical activities by improving access.

1 .....

.....

2 .....

.....

[2]

(c) Using examples, explain how the environment can affect participation in sport and physical activity.

.....

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

© OCR 2022

22 **(a)** Good sports coaches know when and how to use different types of guidance to improve motor skills.

(i) Give **one** example of a type of mechanical guidance used to improve motor skills in sport.

.....

..... **[1]**

(ii) Describe **two** advantages of using manual guidance when improving motor skills in sport.

1 .....

.....

2 .....

.....

[2]

(iii) Describe **one** disadvantage of using visual guidance when improving motor skills in sport.

.....

..... **[1]**

© OCR 2022

(b) Describe the following and give a practical example of each:

Knowledge of performance .....

.....

Practical example .....

.....

Knowledge of results .....

.....

Practical example .....

.....

[4]

(c) Goal setting is used to motivate performers when learning a new skill.

Other than motivation, give **two** reasons why goal setting is important.

1 .....

2 .....

[2]

© OCR 2022

23 **(a)** Describe the importance of fats and fibre as part of a balanced diet.

Fats: .....

.....

Fibre: .....

.....

[2]

(b) Explain **two** reasons why hydration is important for all sports performers.

1 .....

.....

2 .....

.....

[2]

© OCR 2022

(c)* Circuit training is a form of exercise used to improve health and fitness.

Using practical examples, describe how exercise may improve the social health of a performer.

Explain how different fitness components can be improved using circuit training. **[6]**

© OCR 2022

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

END OF QUESTION PAPER

© OCR 2022

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2022

© OCR 2022

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of Cambridge University Press & Assessment, which is itself a department of the University of Cambridge.

© OCR 2022

GCSE

Physical Education

J587/02: Socio-cultural issues and sports psychology

General Certificate of Secondary Education

Mark Scheme for June 2022

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2022

MARKING INSTRUCTIONS

PREPARATION FOR MARKING
RM 3

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: RM Assessor Online Training; OCR Essential Guide to Marking. RM User guide. RM Assessor3 marking user guide (ocr.org.uk)

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal

3. Log-in to RM and mark the 5 practice responses ("scripts") and the 10 standardisation responses

YOU MUST MARK 5 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the RM 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the RM messaging system, or by email.

5. Work crossed out:
   a. where a candidate crosses out an answer and provides an alternative response, the crossed out response is not marked and gains no marks
   b. if a candidate crosses out an answer to a whole question and makes no second attempt, and if the inclusion of the answer does not cause a rubric infringement, the assessor should attempt to mark the crossed out answer and award marks appropriately.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add SEEN to confirm that the work has been seen.

7. There is a NR (No Response) option. Award NR (No Response)
   - if there is nothing written at all in the answer space
   - OR if there is a comment which does not in any way relate to the question (e.g. 'can't do', 'don't know')
   - OR if there is a mark (e.g. a dash, a question mark) which isn't an attempt at the question

Note: Award 0 marks - for an attempt that earns no credit (including copying out the question)

8. The RM **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**

If you have any questions or comments for your team leader, use the phone, the RM messaging system, or e-mail.

9. Assistant Examiners will send a brief report on the performance of candidates to your Team Leader (Supervisor) by the end of the marking period. The Assistant Examiner's Report Form (AERF) can be found on the RM Cambridge Assessment Support Portal (and for traditional marking it is in the Instructions for Examiners). Your report should contain notes on particular strength displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10. For answers marked by levels of response:
    a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
    b. **To determine the mark within the level**, consider the following:

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

11. Annotations used in the detailed Mark Scheme

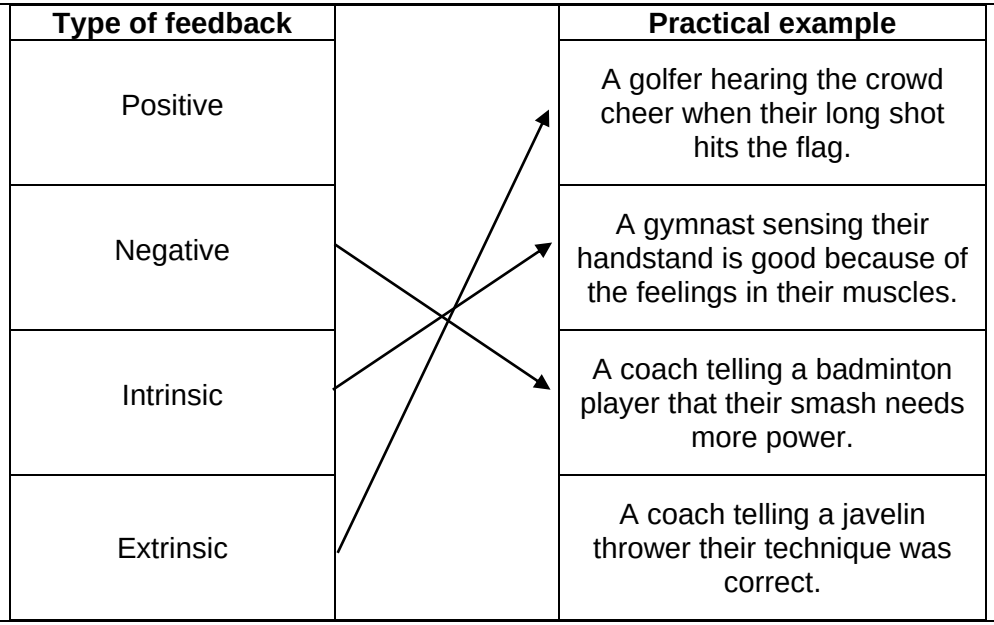
Annotation	Description	Annotation	Description
	Tick	KU	Knowledge and understanding / indicates AO1 on extended response Q (*)
	Cross	EG	Example/Reference / indicates AO2 on extended response Q (*)
BOD	Benefit of doubt	DEV	Development / indicates AO3 on extended response Q (*)
TV	Too vague	L1	Level 1 response on extended response Q (*)
REP	Repeat	L2	Level 2 response on extended response Q (*)
IRRL	Significant amount of material which doesn't answer the question	L3	Level 3 response on extended response Q (*)
SEEN	Noted but no credit given / indicates sub-max reached where relevant	S	Sub-max reached
BP	Blank page		

- **KU, EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.
- On the extended response question (*), one KU, EG or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			One mark from: 1. Television / visual 2. Radio 3. Newspapers / magazines 4. Internet 5. Social media	**1** 1 x (AO1)	Mark first answer only **Do not accept:** Examples of media e.g. Facebook, 5 Live, Instagram (unless social media is stated)
2			Two marks from: 1. Some activities / clubs / NGBs set a **minimum / maximum age** for participation / too young / old 2. **Transportation** to activities might be limited due to being too young to drive / too young to travel bus/train alone 3. PE (physical activity) is compulsory for children up to age of 16 4. **Costs** of participation may prevent participation 5. Participation may be very reliant on support from parents 6. Younger participants may have **lower self-esteem / confidence / physical ability** resulting in them not wanting to participate 7. Younger participants are likely to have more **free time** for regular participation	**2** 2 x (AO1)	Mark first two answers only There must be an AGE FOCUS in the response Less free time = TV
3			One mark for: (A) Men are more likely to participate in sport than women	**1** 1 x (AO1)	
4			One mark for TRUE	**1** 1 x (AO2)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
5			Three marks from: 1. More likely to participate if parents / carers / guardians / siblings **participate / participate together** 2. Family support young people **financially** / family memberships / provide equipment / kit 3. Family provide **transport** to training/matches 4. Parents / carers / guardians / siblings as good **role models / inspire / motivate / educate them of the benefits** 5. Encouragement / frequent exposure to activities with parents / carers / guardians can lead to interest / participation / introduction to clubs at a young age.	**3** 3 x (AO3)	Mark first three answers only **Accept:** Watching sport with parents = 5 Family take (transport) to events = BOD 3
6			One mark for: (C) Refusing to shake hands with officials after a hockey match	**1** 1 x (AO2)	
7			One mark from: 1. Frustration due to losing/officials decisions 2. Copying others 3. Anger / (physical) retaliation / instinct 4. Over arousal during the game 5. As a result of the influence of drugs 6. Taunting from crowd/opponents 7. Controlled aggression required to be effective / nature of the game 8. Pressure to win / gain advantage	**1** 1 x (AO2)	Mark first answer only

Section A					
Question			**Answer**	**Marks**	**Guidance**
8			One mark only from: 1. Enable performers to train harder / longer / train more often 2. Increase strength/ stamina / speed / power / alertness 3. Increase in muscle mass / size / growth / hypertrophy 4. Quicker recovery / injuries heal quicker / reduced fatigue 5. Increase bone strength / density 6. To decrease fat	**1** 1 x (AO1)	Mark first answer only **Accept:** Increase aggression = 2 **Do not accept:** 'Improve performance' on its own = TV More energy = TV
9			One mark from: (Measurable) 1. The sprinter can see/understand exactly **how much they need to improve / to** achieve their goal/target/aim/capability 2. The sprinter knows **their current PB** 3. Sprinter can **see their time improving** 4. Helps make goals **more focused** which is more exciting for the sprinter One mark from: (Recorded) 5. Logging achievements visually is **rewarding/promotes progress** 6. Records / progress can be shared with coach and other important others who might praise the sprinter 7. Records / logbooks / graphs / electronic records which can be easily accessed when not training 8. Recording performances/progress means achievements don't get lost/forgotten 9. The sprinter can **see what their progress** has been over time	**2** 1 x (AO2) 1 x (AO2**)**	One mark per heading Give mark, even if candidate writes it under incorrect heading. **Accept:** See if goal achieved = 1
10			One mark for: TRUE	**1** 1 x (AO2)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
11				**3** 3 x (AO2)	Only 3 marks available No mark for 'positive – a coach telling a javelin thrower their technique was correct' already given on paper
12			One mark for: A sports skill that requires few / little judgement / decisions / information processing / or a few subroutines	**1** 1 x (AO2)	**Do not accept:** Very easy / not a lot of skill / little concentration **or** one whole movement = TV
13			One mark for: Aesthetic The routine / performance / movement looks good/pleasing to the eye One mark for: Fluent / fluid The routine / performance / movement is smooth / flows / not jerky / seamless	**2** 2 x (AO2)	**Accept:** (fluent) No pauses = BOD **Do not accept:** (fluent) Flawless = TV
14			One mark for: (A) A basketball player dribbling past defenders.	**1** 1 x (AO3)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
15			One mark for: (Carbohydrate) Cereal / pasta / potatoes / bread / fruit (juices) / jam One mark for: (Protein) Dairy products / eggs / milk / meat / fish / poultry / chicken / turkey / nuts / seeds	**2** 2 x (AO1)	**Accept**: any other reasonable answer for each nutrient. **Do not accept:** Protein supplements eg protein shakes Same source twice, question states 'different foods. E.g., if pasta given for both answers credit 1 mark only.
16			One mark from: 1. The capacity to carry out life's activities/exercise (without getting tired) 2. The ability to meet physical demands placed on them by the environment / ability to function effectively and efficiently	**1** 1 x (AO1)	**Do not accept:** Being fit = TV
17			Two marks from: 1. Lack of fitness / tire easily / decreased fitness components 2. Obesity / too much body fat/high BMI 3. More prone to injury 4. Poor blood and oxygen circulation / respiratory disease 5. Buildup of fat in arteries / higher cholesterol / increased risk of stroke 6. Increase in blood pressure/ increase in resting HR 7. Weaker bones / bone density reduced / increased risk of Osteoporosis 8. Increased risk / cause of **Type 2** diabetes/not enough insulin produced 9. Muscular atrophy	**2** 2 x (AO1)	Mark first two answers only. **Accept:** Get fatter = BOD 2 **Do not accept:** Answers that relate to posture or heart disease (given in the question).

Section A					
Question			**Answer**	**Marks**	**Guidance**
18			Two marks from: 1. Increased self-esteem / confidence 2. Better stress management / reduces stress 3. Improved self-image 4. Improved mental health / mood / wellbeing / happiness / reduces depression / anxiety	**2** 2 x (AO1)	Mark first two answers only. **Accept:** Sense of achievement = BOD 1 **Do not accept:** Releases endorphins **or** 'enjoyment' = TV
19			One mark from: 1. (Daily) calorie input **equals** calorie output 2. Taking in the right amount / level of energy needed for the expenditure of energy expected 3. A diet that contains the correct proportions of nutrients necessary (to maintain good health) 4. Eating a wide variety of foods in the right proportions, consuming the right amount of food / drink to achieve / maintain a healthy body weight	**1** 1 x (AO1)	**Accept:** Three or more individual food groups in answer = BOD 3 Enough of each food group = BOD 4
20			One mark for: Media **and** sponsorship	**1** 1 x (AO1)	**Do not award any marks if both media and sponsorship are not given.** Accept in any order Use only one annotation

Section B	
Question	**Marks: 3 x AO3**
21a	

Trend/Pattern	Guidance
1 Annual data comparison (activity level)	In 2019 participation rates have increased/are higher in **all** activities **Accept Opposites:** In 2018 participation rates were lower in **all** activities
2.Specific participation E.g**.,** ***largest increases*** – specific activity **OR** E.g. – ***smallest increases***	In 2019 the **largest** increase in participation (5%) takes place in Team Sports for Yrs. 3 – 6 **OR** In active play and informal activities in Yrs. 3 – 6 **OR** Yrs. 7 – 11 In 2019 **smallest** increase in participation (1%) takes place in Swimming activities for (Yrs. 7 – 11 / Yrs. 3 - 6)
3.Specific activity comparison	Participation in active play has increased by 5% (for both age groups in 2019) **OR** Swimming has increased by 2% at Junior School age and 1% at Secondary **OR** Team Sports have increased by 5% at Junior School age and 3% at Secondary **Accept Opposites:** Participation in active play was 5% lower (for both ages in 2018)
4.Comparison - ages E.g. – junior / senior	Junior School Participation rates are higher (in team sports / swimming activities / active play) than secondary age **OR** higher in **all** activities **OR** Participation rates in Junior schools is higher than Secondary age pupils **Accept Opposites:** Secondary age participation rates are lower than Yrs 3-6 (in team sports / swimming / active activities / active play) **OR** Lower in **all** activities
5.Comparison – age/activity ***biggest difference*** **OR** ***Smallest difference***	Between Yrs. 3 - 6 and 7 - 11 the **biggest** difference in participation is in active play Between Yrs. 3 - 6 and 7 – 11 the **smallest** difference in participation is in team sports

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(b)**	**(i)**	Two marks from: 1. Increase / improve sporting facilities/equipment 2. More coaches / coaching / lessons 3. More activities / sports / PE / clubs	**2** 2 x (AO2)	Mark first two answers only.
		(ii)	Two marks from: 1. Change age restrictions / more children's sessions / **after school/holiday** clubs 2. Reduced participation costs / entry fees / membership / equipment fee 3. Improved disabled access (adapted / specialist equipment) 4. Reduced transport costs/increased transport links	**2** 2 x (AO2)	Mark first two answers only. Look for reference to more/better/increased etc in responses.
21	**(c)**		Three marks from: 1. Natural features / green space / lakes / mountains / rivers / sea e.g. Living close to the sea, taking part in water based activities easier 2. Facilities/sports centres / swimming pools e.g. Living close to a sports centre with wide range of clubs to join / living in countryside makes access to gym more difficult. 3. Transport links e.g. Urban areas often provide better transport links which enables better access to facilities / clubs 4. Weather/climate e.g. Snow based activities more popular in Scotland where it usually snows in winter / too hot to play football in Qatar 5. Playing surface / area e.g. All weather surfaces less likely to flood / can be used for longer periods as they do not wear as easily as grass surfaces / games get cancelled if pitch is not fit / safe	**3** 3 x (AO3)	Two or more effects with **no examples** = 1 mark. Award marks for any suitable positive **or** negative example

Section B					
Question			**Answer**	**Marks**	**Guidance**
22	**(a)**	**(i)**	One mark for: Any appropriate example of equipment used to support or guide a performer whilst learning a motor skill e.g. Trampoline / diving / gymnastics harness or swimming armbands / swimming float / stabilisers on a bike / lead rope on horse	**1** 1 x (AO1)	**Do not accept** examples of training aids e.g., tennis/cricket ball feeders
	(a)	**(ii)**	Two marks from: 1. Good for complete beginners 2. Reduces fear/anxiety 3. Gives performers more confidence when learning new skills 4. Helps performers to adjust / improve their techniques easily 5. Can help improve strength / power when performing skills 6. Improves performer safety when learning / prevent from getting inured 7. Allows the development of the correct feel / kinesthetic awareness	**2** 2 x (AO3)	Mark first two answers only.
	(a)	**(iii)**	One mark from: 1. Demonstrations / image must be good quality / correct 2. Not effective if performers are not paying attention / easy to forget 3. Some skills are too complex to demonstrate / hard to replicate / understand 4. Difficult to get the feel / kinesthetic sense of the skill	**1** 1 x (AO3)	Mark first answer only.
22	**(b)**		One mark for: Knowledge of **performance**.	**4**	**Accept**:

Section B					
Question			Answer	Marks	Guidance
			Definition: Information/feedback that relates to the quality of the performance / skill / movement / attempt / how well you played One mark for: Practical example:A hockey coach telling the performer that their grip of the stick whilst dribbling was correct One mark for: Knowledge of **results**. Definition: Information / feedback that relates to the outcome of the performance / skill / movement / attempt One mark for: Practical example: A goalkeeper saving a penalty in football	2 x (AO1) 2 x (AO2)	KoR definition referring to statistics/scores Practical examples which reference a sport/activity **Do not accept:** Definitions that only repeat the form of feedback. e.g., Knowledge of performance is when you get knowledge of your performance. How you performed = TV
22	**(c)**		Two marks for: 1. Training adherence / improves commitment 2. Improve/optimize / better performance/training 3. Gives performers satisfaction / confidence / accomplishment 4. Gives performers more understanding of progress made 5. Allows comparisons with other performers / opponents 6. Gives value to training / monitor progress 7. Gives performers more ownership of their training / progress 8. Helps control anxiety / increases focus / reduce stress	**2** 2 x (AO1)	Mark first two answers only **Accept:** Avoid injury = BOD 2 **Do not accept:** Helps achieve a target = TV Increase effort = TV
23	**(a)**		One mark for one of: (Fats) 1. Source of energy (in low-intensity endurance exercise)	**2** 2 x (AO1)	**Accept:** 'provide enough energy' = BOD 1

Section B					
Question			Answer	Marks	Guidance
			2. Insulation of the body 3. Protection of vital organs 4. Crucial in cell production 5. Crucial for absorption of vitamins One mark for one of: (Fibre) 6. Enables digestive system to work properly 7. Aids effective excretion of waste products 8. Can reduce cholesterol 9. Can limit risk of obesity 10. Can limit risk of Type 2 diabetes		
	(b)		Two marks from: 1. Replace lost fluids, minerals, iron and salt / avoid dehydration 2. Body cells / tissues / organs need water to / reduce risk of cramp/fatigue/headaches/dizziness, to maintain focus, to operate (efficiently) 3. Water is important in urine / waste removal from body 4. Body uses water to regulate temperature / cool down / sweat / homeostasis 5. Water is essential for maintaining blood viscosity	**2** 2 x (AO1)	Mark first two answers only. **Do not accept:** Responses that do not relate to the importance of hydration e.g., don't have yellow urine = TV. Might faint/become lightheaded = BOD

Q23(c)*

Level 3 Descriptors (5–6 marks)

- detailed knowledge & understanding of more than 2 social health benefits
- clear and consistent practical application of knowledge & understanding
- effective analysis/evaluation and/or discussion/explanation/development
- relevant information drawn upon from other areas of the specification
- accurate use of technical and specialist vocabulary
- there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

Level 2 Descriptors (3–4 marks)

- satisfactory knowledge & understanding of at least 2 social health benefits
- some success in practical application of knowledge & understanding
- analysis/ evaluation and/or discussion/explanation/development attempted with some success
- some relevant information drawn upon from other areas of the specification
- technical and specialist vocabulary used with some accuracy
- there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Level 1 (1–2 marks)

- basic knowledge & understanding
- little or no attempt at practical application of knowledge & understanding
- little or no attempt to analyse/ evaluate and/or discuss/explain/develop
- little or no relevant information drawn upon from other areas of the specification
- technical and specialist vocabulary used with limited success
- the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.

(0 marks)

no response or no response worthy of credit.

Level 3 Discriminators

- detailed knowledge & understanding of how exercise improves social health.
- more than 2 components of fitness identified with developed explanations of how circuit training improves components of fitness.
- clear and consistent practical application of knowledge & understanding of how circuit training improves components of fitness.
- All AOs are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed

Level 2 Discriminators

- satisfactory knowledge & understanding of importance of how exercise improves social health.
- 2 components of fitness identified with explanations of how circuit training improves components of fitness.
- some success in practical application of knowledge & understanding of how circuit training improves components of fitness.
- AO1 covered and some success at more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks)

Level 1 Discriminators

- basic knowledge & understanding of how exercise improves social health and/or circuit training
- only one component of fitness identified in explanations of how of how circuit training improves components of fitness.
- little or no attempt at practical application of knowledge & understanding of how circuit training improves components of fitness.

Q23 (c)* indicative content

How exercise may improve the social health of a performer		
AO1 – KU	**AO2 – E.G.**	**AO3 - DEV**
1. (Loneliness) Participating in exercise with others decreases possibility of loneliness/isolation	Attending the local swimming pool with the family.	Participating with others reduces the feeling of being isolated
2. Exercise with others gives opportunity to meet people.	Going for a jog after work with a work colleague.	Sports teams / exercise groups often have chat rooms on social media which helps individuals feel less lonely.
3.(Friendship) Exercise can help people make (new) friends with others who participate in physical activity	Playing in a golf tournament and keeping in contact with an opponent from another club/team.	Friendship group will become larger due to making more contact with others.
4.Strengthening relationships	Taking up a new activity (spinning) at a local sports centre and getting to know others with common interests.	Possibility of arranging to meet up to participate together or socially. Improved self-esteem / confidence may help people to make friends with others.
5.(Belonging) Being part of an exercise class gives a sense of belonging.	Joining a local tennis club, or jogging club for example	By joining a club / team you are more likely to meet other members on a regular basis for training, matches and other social events.
6. Joining a local activity group can develop social skills / teamwork / communication skills	Joining a netball team helps you improve your teamwork	Joining many clubs / teams / activity courses can involve paying memberships which commits individuals to attend, which results in increased/regular social contact.

How different fitness components can be improved using circuit training		
AO1 – KU (Component)	**AO2 – E.G.** (Example of a station) *Accept any appropriate examples of activity (stations) designed to improve any of the following components of fitness, with appropriate explanations.*	**AO3 – DEV** (How training can be progressed)
7. Speed	Can be improved using a skipping station.	Skipping continuously as fast as possible for 30 seconds will help develop speed of the legs.
8. Agility	Can be improved by shuttle runs.	Sprinting over short distances for 30 secs / specific number of reps involves change of speed and direction which will improve agility.
9. Muscular endurance	Can be improved at a bicep curl station.	Using a low weight, and a high number of reps at speed will help improve muscular endurance of the arm muscles
10. Strength	Can be improved by using weights at a squat station	Using a heavy weight with a low number of reps will help improve leg strength.
11. Power	Can be improved at a depth jump/plyometric station.	Jumping from a height – to the floor – and back up will develop leg power.
12. Flexibility	Can be improved at a stretching station	Holding a quadricep/hamstring stretch for 10 – 15 seconds on each leg will help improve flexibility in the hips
13. Stamina / CV endurance	Can be improved at an exercise bike station.	Continually peddling at a steady pace with no change of speed / resistance will help improve stamina.
14. Balance	Can be improved at a balance board station.	Maintaining a position on a balance board will help develop balance.
15. Co-ordination	Can be improved at a hand wall toss station.	Using alternate underarm throws and catches against a wall will help improve hand-eye coordination.
16.Reaction time	Can be improved using a peripheral vision stick	A partner can stand behind you and moves the stick into your field of vision. You tap it as quickly as possible and then your partner moves the stick to a new position. This will improve reaction time and peripheral vision

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on

01223 553998

Alternatively, you can email us on

support@ocr.org.uk

For more information visit

ocr.org.uk/qualifications/resource-finder

ocr.org.uk

Twitter/ocrexams

/ocrexams

/company/ocr

/ocrexams

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT

OCR is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored. © OCR 2022 Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA.

Registered company number 3484466. OCR is an exempt charity.

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up-to-date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please contact us.

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our Expression of Interest form.

Please get in touch if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.

OCR
Oxford Cambridge and RSA

Wednesday 17 May 2023 – Afternoon

GCSE (9–1) Physical Education

J587/01 Physical factors affecting performance

Time allowed: 1 hour

No extra materials are needed.

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **16** pages.

ADVICE
- Read each question carefully before you start your answer.

© OCR 2023 [601/8442/5]
DC (ST/CT) 300756/5
OCR is an exempt Charity

Section A

1 Name a suitable test for strength.

..... **[1]**

2 The image below shows a football player kicking a ball.



(a) (i) State the type of movement that has taken place at the left knee.

..... **[1]**

(ii) Identify the class of lever used at the **knee** when kicking a ball.

..... **[1]**

3 **(a)** State the exercise intensity level that should be performed during a **cool down**.

..... **[1]**

(b) Describe **two** benefits of cooling down after a basketball game.

1 .....

.....

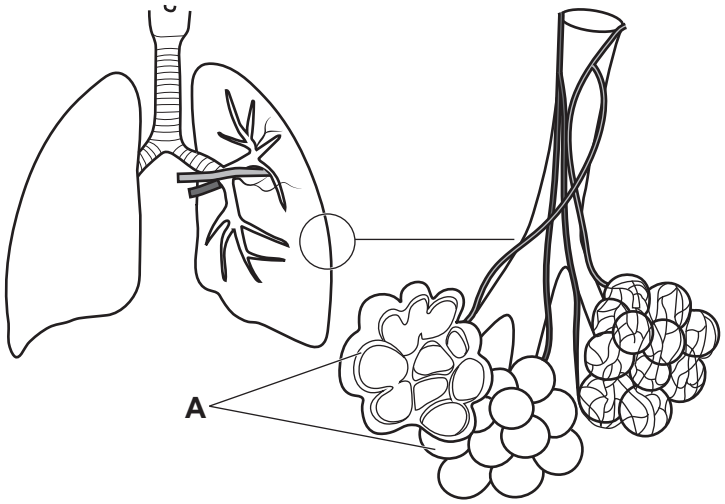
2 .....

.....

[2]

© OCR 2023

4 This is a diagram of the lungs.



(a) (i) Name the structure labelled **A**.

..... **[1]**

(ii) Describe the direction of movement of oxygen that takes place at the structure labelled **A**.

.....

..... **[1]**

(iii) Describe **one feature** of the structure labelled **A**.

Describe **one function** of the feature you have described.

Feature: .....

.....

Function: .....

.....

[2]

© OCR 2023

5 Other than warming up, suggest **two** measures that can help minimise the risk of injury to a volleyball player before they play a game of volleyball.

1 .....

.....

2 .....

.....

[2]

6 **(a)** **(i)** Is blood that flows through the vena cava **oxygenated** or **de-oxygenated**?

Put a tick (✓) in the box next to the correct answer.

De-oxygenated ☐

Oxygenated ☐

[1]

(ii) Describe the structure of the vena cava.

..... **[1]**

7 Which **one** of the following reduces blood flow to non-essential organs during exercise?

Put a tick (✓) in the box next to the correct answer.

A Capillarisation ☐

B Hypertrophy ☐

C Vasoconstriction ☐

D Vasodilation ☐

[1]

8 Define what is meant by a synovial joint.

..... **[1]**

9 State the by-product of exercise that causes fatigue in working muscles.

..... **[1]**

© OCR 2023

10 Using **two** different words from the boxes below, complete the description for a specific movement plane.

The ..... plane runs vertically and divides the body into front and back sections.

A ..... is a practical example of a movement taking place in this plane.

Bicep curl	Forward roll	Frontal
Sagittal	Star jump	Transverse

[2]

11 Name the muscle located at the top of the shoulder.

..... **[1]**

12 **(a)** Describe a surface hazard found on an **artificial** cricket pitch.

.....

..... **[1]**

(b) Describe a **different** surface hazard found on a **grass** cricket pitch.

.....

..... **[1]**

13 Drowning is a potential **hazard** when swimming.

Is this statement true or false?

..... **[1]**

14 Describe how regular exercise keeps **bones** healthy.

..... **[1]**

15 What does 'pliability of ligaments and tendons' mean?

..... **[1]**

© OCR 2023

16 Which **one** of the following is the name of the **main** bone protected by shin pads?

Put a tick (✓) in the box next to the correct answer.

A Carpal ☐

B Femur ☐

C Fibula ☐

D Tibia ☐

[1]

17 Name a **sports skill** that only has the same plane of movement as a somersault.

..... **[1]**

18 Name the **axis of rotation** used when netball players pivot.

..... **[1]**

19 Intensity is part of FITT and describes how hard the training is.

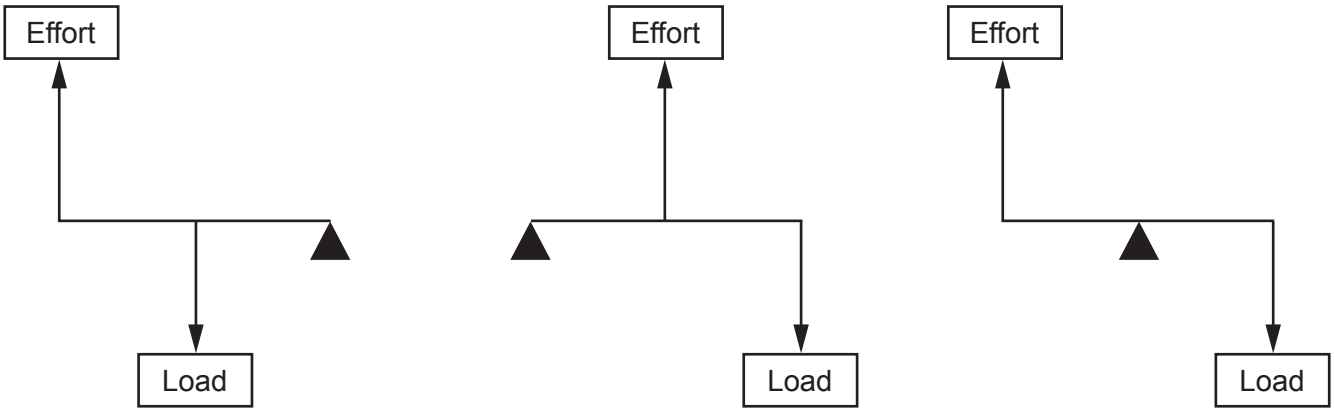
Using a **practical example**, describe how a sprinter can **increase** the intensity of their training.

.....

..... **[1]**

© OCR 2023

20 The diagram below shows the three different **lever** systems, labelled **A**, **B** and **C**.



A **B** **C**

Which one of the lever systems is a **third-class** lever?

Put a tick (✓) in the box next to the correct answer.

A ☐

B ☐

C ☐

[1]

© OCR 2023

Section B

21 (a) Stamina can be measured using the multi-stage fitness test.

The table below shows a set of results, using the multi-stage fitness test, for hockey players before and after pre-season training.

Players	Before pre-season training	After pre-season training	Ratings for Levels
Alex	Level 5	Level 6	Excellent: 13+ Very good: 11–12 Good: 9–10 Average: 7–8 Poor: 5–6 Very poor: <4
Charlie	Level 7	Level 10	
Finley	Level 9	Level 8	
Li	Level 11	Level 15	
Zayn	Level 6	Level 11	

(i) How many players had an **above** average rating **before** pre-season training?

..... **[1]**

(ii) Name the player who **improved** their stamina the most during pre-season training.

..... **[1]**

(iii) Name the player who experienced **reversibility** in stamina during pre-season training.

..... **[1]**

(iv) Name another suitable test to measure the stamina of hockey players.

..... **[1]**

(b) Suggest **two** reasons why some hockey players in the table above have made less improvement than others during pre-season training.

1 .....

.....

2 .....

.....

[2]

© OCR 2023

(c) Describe the two principles of training stated below.

Give a practical example from **swimming** for each principle of training you have described.

Specificity: .....

.....

Practical example: .....

.....

Progression: .....

.....

Practical example: .....

.....

[4]

© OCR 2023

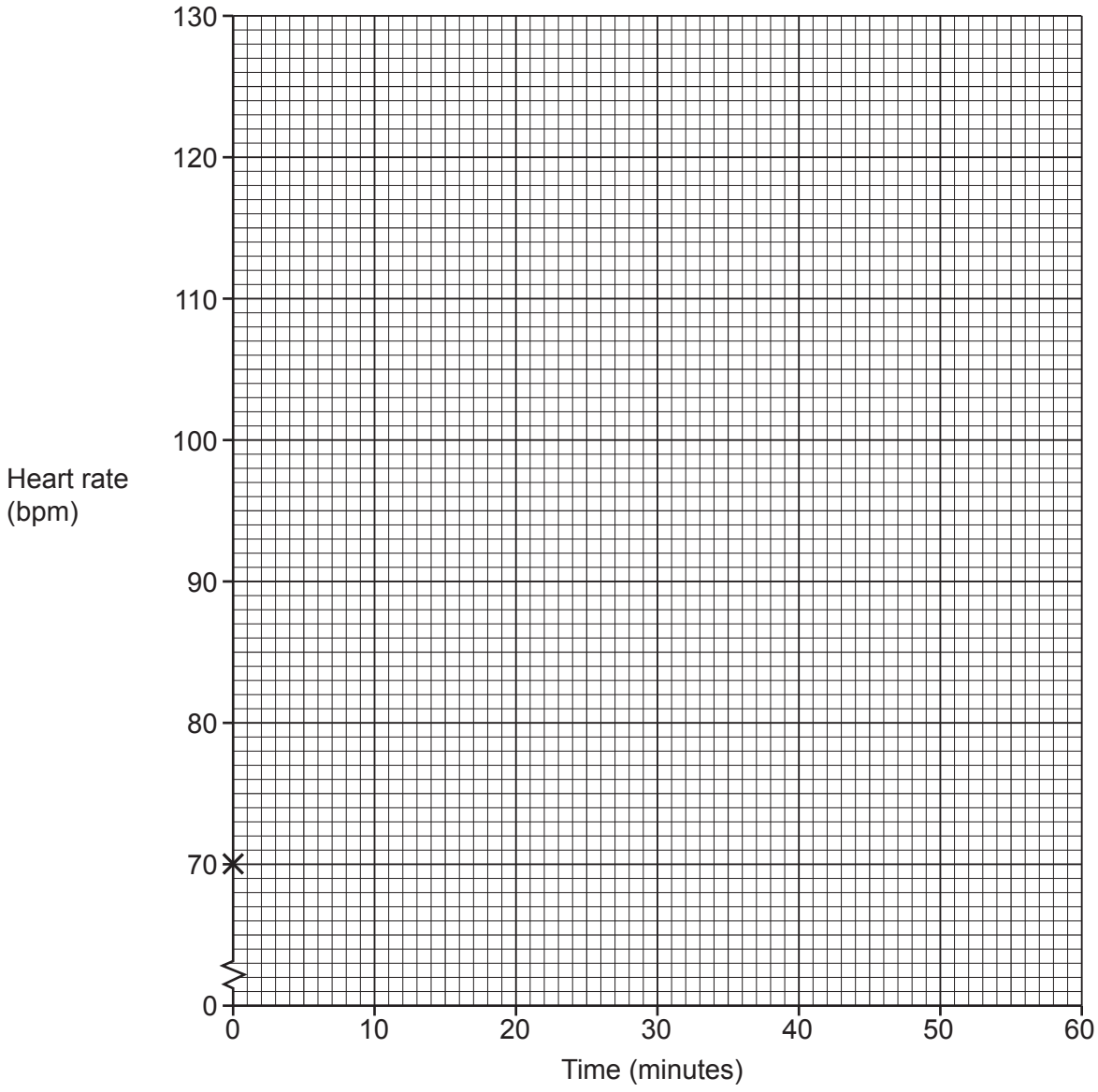
22 (a) Sam's heart rate is monitored while they complete a 20-minute training session with a warm up and a cool down.

The following changes are recorded:

- 10 minute warm up – heart rate increases by 15 bpm
- First half of training session – heart rate increases to 110 bpm
- Second half of training session – heart rate remains constant
- Following 15 minute cool down – heart rate drops to 80 bpm.

Plot the **four** changes to Sam's heart rate on the graph below.

Sam's resting heart rate is already shown on the graph as 'X'.



[4]

© OCR 2023

(b) (i) Other than an increased **heart** rate, describe **three** short-term effects of exercise on Sam's **cardiovascular** system.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(ii) Other than an increased **breathing** rate, describe **three** short-term effects of exercise on Sam's **respiratory** system.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

© OCR 2023

23 (a) (i) Describe **two** differences between **aerobic** and **anaerobic** exercise.

1 .....

.....

2 .....

.....

[2]

(ii) Using events from track and field athletics, state one **aerobic** event and one **anaerobic** event.

Aerobic event: .....

Anaerobic event: .....

[2]

(b)* Exercise can **improve** physical and mental health.

Living a sedentary lifestyle can have **negative** impacts on mental health.

Explain the **long-term** benefits of exercise on the cardiovascular system.

Using practical examples, describe the **emotional** and **social** consequences of a sedentary lifestyle. **[6]**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

END OF QUESTION PAPER

© OCR 2023

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

© OCR 2023

© OCR 2023

© OCR 2023

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of Cambridge University Press & Assessment, which is itself a department of the University of Cambridge.

© OCR 2023

OCR
Oxford Cambridge and RSA

Wednesday 17 May 2023 Afternoon

GCSE (9–1) Physical Education

J587/01: Physical factors affecting performance

POST STANDARDISATION MARK SCHEME

Duration: 1 hour

MAXIMUM MARK 60

Version: 10

Last updated: 30/05/2023

(FOR OFFICE USE ONLY)

This document consists of 20 pages

Created with Scanner Pro

Section A					
Question			Answer	Marks	Guidance
1			One mark for: **1 rep max OR 1RM OR grip (strength) dynamometer** / hand grip dynamometer	1 AO1	**Do not accept:** tests of other components of fitness, e.g. press-up test / sit-up test / standing jump / vertical jump **Do not accept:** 'grip test' on its own = TV **Do not accept:** 'weightlifting' = TV grip strength test = TV dynometer = BOD **Accept:** hand grip test = BOD **Accept:** 'dynamometer' on its own = BOD **Accept:** grip dynometer (or other similar misspellings) as BOD Hand dynamometer = BOD
2	(a)	(i)	One mark for: **(Left knee) extension**	1 AO1	**Do not accept:** straight or versions of this word = TV **Do not accept: extension and flexion** **Accept: flexion to extension** = ✓ Accept: extend / extended
		(ii)	One mark for: **Third / 3 (class lever)**	1 AO2	**N.B.** The word 'class' is not required as it is in the question.
3	(a)		One mark for: **Low / moderate / medium (intensity)** 50% = TV	1 AO1	**Do not accept:** calm = TV **Accept:** equivalent terms, e.g. light / slow / steady = ✓

Created with Scanner Pro

3	(b)		Two marks for two of: 1. Helps the body's transition back to a resting state **OR speeds up** recovery 2. **Gradually** lowers heart rate **OR** maintains elevated heart rate 3. **Gradually** reduces blood pressure 4. Maintains circulation of blood / oxygen 5. **Gradually** reduces breathing rate **OR** maintains elevated breathing rate 6. **Gradually** reduces body / muscle temperature **OR** maintains elevated body / muscle temperature 7. **Speeds up** removal of waste products / lactic acid 8. Reduces the risk of **muscle** soreness / aching muscles / DOMS / stiffness / cramp 9. Reduces the risk of blood pooling 10. Reduces the risk of damage to joints 11. Reduces the risk of fainting / lightheadedness / nausea	2 AO2	Mark first two **responses only (see** Point 5 in **Marking Instructions – Short Answer Questions)** **If 2 correct benefits given under 1 on scaffold credit both.** **If a wrong answer is given under 1 but 2 correct benefits are given under 2, one mark only** **Do not accept:** Lowers heart rate or breathing rate or body temperature without 'gradually' or equiv = TV. **Do not accept:** prevents / reduces build-up of lactic acid = TV **Do not accept:** removes lactic acid = TV (must say speeds up / helps or equiv.) **Do not accept:** reduce muscle fatigue = TV **Do not accept:** Gets oxygen into body = TV **Do not accept:** Reduces oxygen debt = TV **Do not accept**: reduced risk of injury = TV **N.B.** For pt. 8-11 use BOD for prevent / stop, e.g. prevent blood pooling = BOD
4	(a)	(i)	One mark for: Alveoli	1 AO1	**Accept:** phonetic spellings **Accept:** alveolus = ✓
	(a)	(ii)	One mark for: (Oxygen diffuses) into capillaries / blood / red blood cells / haemoglobin	1 AO1	**Do not accept:** 'out / outwards' on its own = TV (answers must say where O_2 goes to) **Do not accept:** oxygen goes to the heart = TV

Created with Scanner Pro

	(a)	(iii)	One mark sub-max for feature: **One mark sub-max for function:** Feature = TV Func = Seen Feature / Function 1. Thin **walls** / one-cell thick / **semi-permeable** / 2. Small distance for **oxygen** / carbon **dioxide** / gases to pass through faster **OR** more efficient / faster gaseous exchange / diffusion 3. Surrounded by capillaries / 4. To provide **blood** for gaseous exchange / diffusion O_2 → blood = TV 5. **Large** surface **area OR large number of alveoli** / 6. more gases / oxygen / CO_2 can pass through **OR** more efficient gaseous exchange / diffusion (more O_2 = ✓) 7. Walls of alveoli **are moist** / 8. Gases **dissolve** to pass through **OR** more efficient gaseous exchange / diffusion 9. Walls of alveoli contain **elastic fibres** / 10. Allows the walls to increase surface area slightly during inspiration	2 AO1	N.B. Mark 1st feature described only. If more than one feature is described, only mark the function of the first feature. **Function cannot be credited unless feature is marked as correct.** **If feature is correctly identified in function it may be credited as long as a different answer for feature has not already been marked** **Do not accept:** features of capillaries = IRRL **Do not accept:** 'thin' on its own = TV **Do not accept:** surrounded by a capillary = TV **Accept:** 'membrane' = BOD 1 **Accept:** allows for diffusion / gas exchange = BOD 2 or 8 but TV for 4 and 6 **Accept:** 'more blood at the alveoli' = BOD 4 GAS EXCHANGE ONLY = TV large air sacs = TV
5			Two marks for two of: 1. (Wearing / using) personal protective equipment / PPE **OR** e.g. knee / elbow pads / ankle supports / gumshield 2. (Wearing / using) **correct** clothing / **suitable** / **supportive** footwear **OR** e.g. volleyball shoes with grip / to absorb impact of landings 3. Having an appropriate level of competition **OR** e.g. players or teams of similar standard 4. Lifting / carrying / using equipment safely **OR** e.g. 2 people to carry posts / ball trolleys 5. Completing risk assessments or safety checks **OR** e.g. check court / floor is not wet / slippery / no jewellery / hair tied back check for / remove hazards | broken equipment Correct equipment = BOD / other = TV Safe court = ✓ BOD	2 AO2	**Do not accept:** Warming up (in question) or reference to warm up components = **REP** or cooling down (question states before the activity) = X **Do not accept:** hydration / sleep = TV **Do not accept:** fair play / sportsmanship / play by rules = TV (not before a game) **Do not accept:** unused equipment not put away = TV **Do not accept:** protective footwear = TV **Do not accept:** use correct techniques = TV (not before a game) loose equipment = TV **Accept:** Knee / medical tape = BOD 1 **Accept:** Examples on their own, e.g. knee pads = ✓ 1 **Accept:** correct equipment = BOD 1 correct ball = BOD **Accept:** equipment set up properly = BOD 5

Surface is suitable = BOD

NO EQUIPMENT LEFT OUT = TV

Created with Scanner Pro

6	(a)	(i)	One mark for: De-oxygenated	1 AO1	
	(a)	(ii)	One mark for one of: 1. Thin walls 2. Large diameter **OR** wide / large lumen 3. Does not have valves	1 AO1	**Do not accept:** Has valves = X **Do not accept:** 'lumen' on its own = TV **Do not accept:** thick lumen = TV **Do not accept:** Carries (deoxygenated) blood (in question 6ai) or carries blood under low pressure (not a structure) **Do not accept:** large surface area = TV
7			One mark for: **C** Vasoconstriction	1 AO1	
8			One mark for: (Freely) moveable joint **OR** a joint that **allows** movement	1 AO1	**Do not accept:** contains synovial fluid / cartilage = TV **Do not accept:** definitions of a joint, e.g. where 2 bones meet = TV (on it's own) **Do not** accept: 'movement at a joint' = TV
9			One mark for: **Lactic acid**	1 AO1	**Accept:** lactate
10			Two marks for: 1. The **frontal** plane runs vertically and divides the body into front and back sections. 2. A **star jump** is a practical example of a movement taking place in this plane.	2 AO3	

Created with Scanner Pro

11			One mark for: Deltoid	1 AO1	**Accept:** Trapezius / trapezium = BOD
12	a		One mark for one of: 1. Slippery / wet surface / water / ice / frozen / 2. Litter / glass / stones / faeces / stumps / wickets / balls / ball / bags / equipment 3. Uneven / damaged surface / holes / bare patches / pitch not layed right 4. Hard surface 5. Sightscreen / boundary rope / boundary flags DNA: LESS GRIP black bits of astro = TV	1 AO2	Mark 1st **response** only **N.B.** The question says on the surface of the cricket pitch, **not** the cricket ground. **Do not accept:** the effects of a hazard, e.g. Astro burn / ball bouncing off pitch / astro flickering up **Do not accept**: answers that are not found on the surface of an artificial pitch or are found off the pitch. **Do not accept:** short run-off (or equivalent) = TV **Do not accept:** footwear / spikes = TV **Do not accept:** sharp objects = TV loose fenc weather conditions = TV Accept: tree (as a few pitches have a tree on pitch)
	b		One mark for one of: 1. Slippery / wet surface / water / muddy / ice / frozen 2. Litter / glass / stones / faeces / stumps / wickets / balls / ball / bags / equipment 3. Uneven / damaged surface / holes / bowlers footmarks 4. Hard surface 5. Sightscreen / boundary rope / boundary flags Badly stored equipment eg. netting = BOD	1 AO2	Mark 1st **response only** **Do not accept:** Same response for 12 a (questions states different hazards) but answers can be from the same marking point **Do not accept:** 'grass' on its own (in question) = **REP** **Do not accept:** Hay fever / pollen = TV (not on surface) **Do not accept:** short run-off (or equivalent) = TV **Do not accept:** footwear / spikes = TV **Do not accept:** sharp objects = TV **Accept:** overgrown grass / clumps of grass / mole hills = ✓ pt. 3 Accept: tree (as a few pitches have a tree on pitch)
13			One mark for:	1 AO1	**N.B.** Drowning is a risk, not hazard

Created with Scanner Pro

			False		

14			One mark for: Increased bone density **OR** stronger bones **OR** reduced risk of osteoporosis **OR** bones stay strong **OR** improve bone marrow **OR** increase blood cell production	1 AO1	**Do not accept:** Healthy bones (in question) **use REP** **Do not accept:** reduced risk of arthritis (question is about bones, not joints) = TV **Do not accept:** Increased mineral storage = TV **Accept:** (opposites, e.g.) stops bones becoming weak / brittle = BOD
15			One mark for: **They are flexible / elastic OR they can stretch**	1 AO1	Accept: references to **range** of movement or allows movement = BOD
16			One mark for: **D Tibia**	1 AO1	
17			One mark for: (Examples include but are not limited to:) **sprinting / running / forward roll / biceps curl / kicking a football / heading a football / football throw-in / cycling / sit up / burpees / squats / deadlift / tumble turn / chest pass / basketball shot**	1 AO3	**Mark 1st response only** **Do not accept:** somersault (in question) or front **flip** or back flip **Use REP** **Do not accept:** sports skills that have movements in other planes as well, e.g. tennis serve / cricket bowling / diving / throwing a ball / flat spin are all TV **Do not accept:** balances, e.g. handstand **Do not accept:** passing / shooting / throwing on its own = TV **Accept:** sports skills where the only movements are **flexion / extension** at joints
18			One mark for:	1 AO3	

Created with Scanner Pro

			Longitudinal		

19			One mark for (practical example applied to training for a sprinter): **Increase** the number of sprints **OR** increase the number of reps / sets **OR** **increase** the weight / resistance / distance / speed run **OR** **decrease** recovery time **between** sprints / reps / sets MUST REF SETS / EXERCISE / REPS sprint longer than @ same speed = TV FIRST ✓ ANSWER NOT 1ST ANSWER ~~longer distance~~ ✓ run more times = BOD speed up = faster ✓ more time training = TV longer = TV more time lower = ~~BOD~~ TV sprinter reducing time to sprint 100m by 2 secs = TV	1 AO2	**Do not accept:** Response with **no** practical example, **e.g.** no reference to sprints / weights / reps or equivalent **Do not accept:** Responses to other sports / activities even if correct e.g. a body builder increases the amount of weight they lift = TV (question is for a sprinter) **Do not accept:** make exercises harder = TV **Do not accept:** use overload = TV **Do not accept:** Increase frequency / time / duration (different components of FITT) = TV **Do not accept:** sprint for longer = TV (duration) **Do not accept:** change in terrain = TV (must show an increase in intensity) **Accept:** increase gradient or greater resistance from the ground, e.g. run in water / on sand. **Accept:** sprint for a faster time = BOD run uphill = ✓
20			One mark for: **B**	1 AO1	

Created with Scanner Pro

Section B					
Question			Answer	Marks	Guidance
21	(a)	(i)	One mark for: **2 OR Finley AND Li**	1 AO3	
		(ii)	One mark for: **Zayn**	1 AO3	
		(iii)	One mark for: **Finley**	1 AO3	
		(iv)	One mark for: **Cooper 12-minute run / walk (test)** press up test Sit up test	1 AO1	Do **not accept:** multi-stage fitness test or bleep / beep test. Use REP **Do not accept:** Running round a track = TV **Accept:** 'Cooper test' 'Cooper run' and '12-minute run' as BODs **Accept:** Cooper 10-minute run (or other time) = BOD Accept: other suitable tests of stamina.
	(b)		Two marks for two of: 1. Lack of effort / motivation / drive **OR** trained at lower intensity **OR** trained less **OR** didn't train **OR** poor attitude / poor work ethic 2. (Unable to train) due to injury / illness / other commitments 3. Fitter players may make less improvement **OR** some players already have high (fitness) levels 4. Lack of (SMART) goals **OR** chose to focus on a different fitness component, e.g. strength 5. Errors made in data collection / recording of results	2 AO3	**Do not accept:** 'different playing positions' = TV **Do not accept:** different starting points / obese = TV **Do not accept:** stamina may be close to their best = TV **Accept:** opposite arguments for pt. 1, e.g. some put in more effort or 'different amounts of effort' = ✓ 1 **Accept:** 'injury' on its own = BOD 2 **Two marks for:** e.g. 'trained less hard due to injury' or 'didn't train due to injury' = ✓ ✓ 1 and 2

Created with Scanner Pro

	(c)		Four marks for: 1. (Specificity) training should be **relevant / suited / appropriate / targeted** to (**one of:**) performer's sport / performer's needs / energy system used / muscle groups used / area of the body / fitness component / stroke 2. (example) targeting the main muscle groups in arms to improve front crawl **OR** training in the swimming pool **OR** focusing on front crawl **because** that is your event / race 3. (Progression) training should become **gradually / slowly** more demanding **OR** a **gradual / slow** increase in intensity 4. (example) Doing more repetitions of lengths in the pool **OR** increase number of (swimming) sessions per week	4 2 x AO1 2 x AO2	N.B. descriptions of training principles do not have to be applied to swimming, **but the examples must be.** **N.B. mark can be given for example if the description of the principle is not credited** Where there is repetition of the name of each principle, e.g. training must be **specific** to the sport or training must **progress** in difficulty, put **REP** above the word. The answer may still be credited if correct, e.g. 'Meeting specific (REP) demands of the sport' = ✓1 **Do not accept:** gradually increase level = TV **Do not accept:** 'do front crawl' on its own = TV. For pt 2 answer must have some explanation to **show why** you might do front crawl. **Do not accept:** examples of specificity that say what you don't do, e.g. 'don't do backstroke if you are a front crawl swimmer' = TV **Accept:** target the area you want to improve = BOD 1 **Accept:** focus on breaststroke leg kick = BOD 2 **Accept:** Long / short distance swimmer doing long / short distance training = BOD 2 **Accept:** swim for longer = BOD 4

Swimmer swimming = ✓

Must include

Harder

improvement = TV

More challenging = TV

training area you want to work on = TV

2. BOD = long dist training for LD swimmer
2. train A.C. + upper body strength for LD Swim
2. Practice jumping off block
4. rest between swimming sets = shortened.
~~2 Practice~~
3. slowly make training more difficult = ✓BOD

specific to one's sport = TV

Trains areas = BOD?

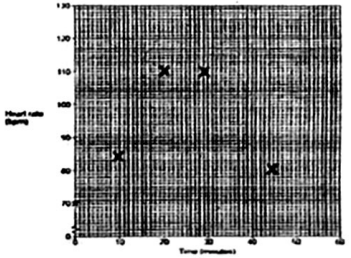
2. swimmer should focus on musc. God not balance.

2. LD swimmer working Musc/CV BOD! = TV (nothing about recovery stage = ✓)

2 swimmer focus training on CoF = TV (even with eg)

practising hand and legs = ✓BOD

Created with Scanner Pro

22	(a)		Four marks for: 1. 85 bpm at 10 minutes 2. 110 bpm at 20 minutes 3. 110 bpm at 30 minutes 4. 80 bpm at 45 minutes **OR** 15 minutes after 3rd point plotted and at 80 bpm	4 AO3	N.B. If points are plotted correctly ignore any lines that may be drawn incorrectly.  Annotations must be close to each plotted point. Do not credit / annotate plotted point at 70 bpm.
	(b)	(i)	Three marks for three of: 1. **Increase** in stroke volume **OR more** blood pumped out of the heart **per beat** 2. **Increase** in cardiac output **OR more** blood pumped out of the heart **per minute** 3. **Increase** in blood flow / oxygen transport / oxygen delivery 4. Vascular shunt **OR** vasodilation of blood vessels to muscles **OR** vasoconstriction of blood vessels to other organs **OR** less blood to other organs 5. **Increase** in **blood** pressure 6. **Increase** in **blood** lactate / lactic acid / CO_2 **OR decrease** in **blood** acidity 7. **Increase** in **blood** temperature 8. Blood vessels near skin dilate	3 AO2	N.B. short-term effects must be to **cardiovascular system** so blood is a key word in pts. 5-7. Use **IRRL** for references to other systems **Do not accept:** long-term adaptations to training = IRRL **Do not accept:** increase in heart rate (in question) use **REP** **Do not accept:** heart works harder = TV **Do not accept:** increase in (body) temperature = TV **Do not accept:** stronger blood flow = TV **Do not accept:** more gas exchange (respiratory or muscular system) = IRRL ↑ air exhaled = TV **Accept:** more deoxygenated blood to heart = BOD 3

Created with Scanner Pro

	(b)	(ii)	Three marks for three of: heavier breathing 1. **Increase** in tidal volume **OR increased** depth of breathing 2. **Increase** in minute volume / minute ventilation 3. Respiratory / intercostal / diaphragm muscles work harder / contract stronger / contract faster 4. **Increase** in gaseous exchange / diffusion **OR** increase in concentration gradient **OR more** oxygen breathed in **OR more** carbon dioxide breathed out Lactic acid = TV ↑demand for O_2 = TV Diaphragm ↑ and ↓ more = TV ~~↑Lung Capacity = TV~~ More O_2 stored in lungs = TV	3 AO2	**Do not accept:** increase in breathing rate or faster breathing or shortness of breath (in question) use **REP** longer breaths = RESP **Do not accept:** references to other systems, e.g. more oxygen to working muscles (circulatory or muscular) = IRRL **Do not accept:** long-term adaptations to training, e.g. increase in lung capacity = IRRL **Do not accept:** lungs work harder = TV **Do not accept:** oxygen debt = TV **Do not accept:** fatigue in respiratory muscles = TV **Accept:** more **air** taken in or larger thoracic cavity = BOD 1 **Accept:** increase in respiratory muscle temperature = BOD 3
23	(a)	(i)	Two marks for two of: MUST BE OPPOSITES **Aerobic (exercise)** / **Anaerobic (exercise)** 1. Uses / requires oxygen **OR** no oxygen debt / No / little / not enough oxygen used / required **OR** oxygen debt created 2. Continuous exercise **OR** 3+ minutes / Short bursts of exercise **OR** up to 30 seconds 3. Low / moderate intensity / High intensity 4. No lactic acid produced **OR** CO_2 / H_2O produced / Lactic acid produced	2 AO1	Each answer must show a difference by stating both sides of one point in the table **Accept:** aerobic is long/er duration **AND anaerobic is** short/er duration = BOD 2 **Accept:** aerobic is lower intensity **AND anaerobic is** higher intensity = BOD 3 much quicker = TV long/short term = TV aerobic = short dist } BOD anaerobic = long dist

Created with Scanner Pro

		(ii)	Two marks for: **1. (Aerobic event) 800m / 1500m / 3000m / 5000m / 5k(m) / 10000m / 10k(m) / steeplechase / race walking** **2. (Anaerobic event) 60m / 100m / 200m / 300m / 400m / hurdles / long jump / triple jump / high jump / pole vault / javelin / shot / discus / hammer**	**2** AO2	**Do not accept:** distances between 401 – 799m = TV (50:50 aerobic: anaerobic) **Do not accept:** 'sprint' 'sprinting' 'short distance running' 'walking' on its own = TV **Do not accept**: long distance running / triathlon / parkrun / cycling / swimming / rowing or games activities = TV **Do not accept:** if units make the answer wrong, e.g. 800cm = X **Accept:** any correct distance given without metres, e.g. 1500 = BOD (but not 5 or 10 without kilometres / k) **Accept:** relay = ✓ 2 1000m sprint **Accept:** 800m sprint / 1500m sprint = BOD 1 **Accept:** mile / marathon / cross country = BOD 1 **Accept as aerobic:** any distance 800m+ = BOD 1 **Accept as anaerobic:** any distance 50 – 400m = BOD 2

Created with Scanner Pro

Level 3 (5–6 marks)
- detailed knowledge & understanding
- clear and consistent practical application of knowledge & understanding
- effective analysis/evaluation and/or discussion/explanation/development
- relevant information drawn upon from other areas of the specification
- accurate use of technical and specialist vocabulary
- there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

Level 2 (3–4 marks)
- satisfactory knowledge & understanding
- some success in practical application of knowledge & understanding
- analysis/ evaluation and/or discussion/explanation/development attempted with some success
- some relevant information drawn upon from other areas of the specification
- technical and specialist vocabulary used with some accuracy
- there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Level 1 (1–2 marks)
- basic knowledge & understanding
- little or no attempt at practical application of knowledge & understanding
- little or no attempt to analyse/ evaluate and/or discuss/explain/develop
- little or no relevant information drawn upon from other areas of the specification
- technical and specialist vocabulary used with limited success
- the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.

(0 marks)
- no response or no response worthy of credit.

Level 3 Discriminators
- detailed knowledge & understanding of long-term benefits of exercise on the cardiovascular system and the emotional and social consequences of sedentary lifestyle
- long-term benefits of exercise on the cardiovascular system are explained
- different emotional and social consequences are described and supported with relevant practical examples
- all AOs are well covered for Level 3; some imbalance between them may be present for 5 marks. At 6 marks, both are equally well addressed

Level 2 Discriminators
- satisfactory knowledge & understanding of long-term benefits of exercise on the cardiovascular system and the emotional and social consequences of sedentary lifestyle
- some long-term benefits of exercise on the cardiovascular system may be explained and some may only be described
- some emotional and social consequences are described with some examples
- some success at more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks)

Level 1 Discriminators
- basic knowledge & understanding long-term benefits of exercise on the cardiovascular system and the emotional and/or social consequences of sedentary lifestyle
- few emotional and social consequences described with few examples
- responses only demonstrating AO1 knowledge and understanding are Level 1

Created with Scanner Pro

Q23 (b)* Indicative content (6 marks - 2 x AO1, 2 x AO2, 2 x AO3)

(long-term benefits of exercise on the cardiovascular system)

1. **Lower resting** heart rate
   - Bradycardia
   - Heart doesn't need to work as hard / more efficient
2. **Larger / stronger** heart **OR** (cardiac) hypertrophy
   - Stronger contractions
3. **Increase** in stroke volume
   - At rest and high intensity
   - More blood pumped from the heart in one beat
4. **Increase** in **maximum** cardiac output
   - Higher volume of blood ejected from left ventricle in one minute **during high intensity exercise**
5. **Capillarisation OR Increased** capillary density
   - Improved circulation
   - Greater surface area for gaseous exchange **OR** more efficient / faster diffusion
   - More oxygen to muscles **OR** faster removal of CO_2 / lactic acid
6. **More efficient** vascular shunt mechanism
   - More blood to (working) muscles / body (credit **once (DEV)** in relation to any of pts. 2, 3, 4, 5 or 6)
7. **Lower** blood pressure
   - Less strain on the heart / blood vessels / CHD
   - Reduced risk of heart complications / strokes / heart attacks / CHD
8. **Increase** in red / white blood cells
   - (red) more haemoglobin / haemocrit
   - (red) Increased oxygen carrying capacity to supply working muscles
   - (white) better able to fight infections / disease
9. **Increased** plasma / blood volume
   - Decrease in blood viscosity
   - Blood flow is easier through blood vessels
10. **Faster / shorter** recovery rate
    - Heart rate returns to resting value faster after exercise
    - Performer will recover quicker from playing sport / training

AO1 = numbered points (KU), AO3 = bullet points (DEV), AO2 = E.g. (EG)

Do not credit: increased cardiovascular endurance / stamina (tenuous link to question. Question is limited to benefits on CV system)
Do not credit opposites, e.g. benefits of an active lifestyle. Use SEEN

N.B. Physical health issues may lead to emotional / social consequences, e.g. obesity. These can be credited with EG if linked to an emotional / social consequence.

(emotional consequences of a sedentary lifestyle)

11. Poor mental health / depression / anxiety / wellbeing
    E.g. unable to benefit from release of endorphins / serotonin from exercise
12. Low self-esteem / confidence **OR** increased self-doubt
    E.g. No experience of success or competition **OR** feel unable to participate in sport
13. Poor self-image / body image
    E.g. due to being unfit / obese or overweight / lack of muscle tone
14. Poor stress management **OR** unable to relieve tension
    E.g. not playing sport to take mind of other stresses **OR** unable to channel aggression / frustration / relax / unwind / gain catharsis through exercise / lack of exercise

(social consequences of a sedentary lifestyle)

15. Loneliness **OR** isolation
    E.g. - Unable to make new friends with other members of a sports team / club
16. Feeling of not belonging to a group
    E.g. – Not a member of sports team / club / not taking part in team sports
17. Lack of friendships **OR** no common experience (with others)
    E.g. – Unable to share sporting experiences / sporting success
18. Interests are inactive / do not support healthy lifestyle
    E.g. - Prefer own company / couch potato syndrome / watching TV / computer games **OR** copy friends who have sedentary lifestyles

	KU	DEV	KU	EG	
1	1	0	0	0	1
3	2	1	1	0	1
2	4	0	3	1	2
4	2	2	3	3	4
6	4	7	5	5	6

BALANCED

	KU	DEV	KU	EG	
4	2	5	4	2	4
5	4	0	3	3	3
4	2	4	3	4	4

20

Created with Scanner Pro

GCSE

Physical Education

J587/01: Physical factors affecting performance

General Certificate of Secondary Education

Mark Scheme for June 2023

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2023

MARKING INSTRUCTIONS

PREPARATION FOR MARKING
SCORIS

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: RM Assessor Online Training; OCR Essential Guide to Marking.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3. Log-in to scoris and mark the 5 practice responses ("scripts") and the 10 standardisation responses

YOU MUST MARK 5 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the Scoris 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the Scoris messaging system, or by email.

5. Crossed Out Responses

Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

Rubric Error Responses – Optional Questions

Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM assessor, which will select the highest mark from those awarded. (The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)

Contradictory Responses

When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only one mark per response)

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. (The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)

Short Answer Questions (requiring a more developed response, worth two or more marks)

If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Longer Answer Questions (requiring a developed response)

Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add SEEN to confirm that the work has been seen.

7. Award No Response (NR) if:

- there is nothing written in the answer space. Use SEEN annotation in the blank space.

Award Zero '0' if:

- anything is written in the answer space and is not worthy of credit (this includes text and symbols).

Team Leaders must confirm the correct use of the NR button with their markers before live marking commences and should check this when reviewing scripts.

8. The scoris **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**
If you have any questions or comments for your team leader, use the phone, the scoris messaging system, or e-mail.

9. Assistant Examiners will send a brief report on the performance of candidates to your Team Leader (Supervisor) by the end of the marking period. The Assistant Examiner's Report Form (AERF) can be found on the RM Cambridge Assessment Support Portal (and for traditional marking it is in the Instructions for Examiners). Your report should contain notes on particular strength displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10. For answers marked by levels of response:
    a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
    b. **To determine the mark within the level**, consider the following:

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

11. Annotations used in the detailed Mark Scheme

Screen Annotation	Meaning	Description/when to use
	Tick	A correct answer that deserves a mark
	Cross	A factually incorrect answer
BOD	Benefit of doubt	An answer that deserves the benefit of the doubt (must be accompanied by a tick)
TV	Too vague	An answer that is too vague to gain credit
REP	Repeat	A repeat of an answer that has already been credited
IRRL	Irrelevant	Significant amount of material which doesn't answer the question
SEEN	Seen	Seen by examiner but no credit given / indicates that an answer continues after a sub-max has been reached or nothing written in answer space and NR credited
BP	Blank page	Blank page (for any page with no candidate writing on it)
KU	Knowledge/Understanding	Knowledge and understanding / indicates AO1 on extended response Q (*)
EG	Example	Example/Reference / indicates AO2 on extended response Q (*)
DEV	Development	Development / indicates AO3 on extended response Q (*)
L1	Level 1	Level 1 response on extended response Q (*)
L2	Level 2	Level 2 response on extended response Q (*)
L3	Level 3	Level 3 response on extended response Q (*)
S	Sub-max	This indicates that a sub-max has been reached

- **KU, EG** and **DEV** used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.

- On the extended response question (*), one **KU**, **EG** or **DEV** does not mean one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			One mark for: 1 rep max **OR** 1RM **OR** grip (strength) dynamometer	**1** AO1	**Do not accept:** tests of other components of fitness, e.g. press-up test / sit-up test / standing jump / vertical jump **Do not accept:** 'grip test' on its own = TV **Do not accept:** 'weightlifting' = TV **Accept:** hand grip test = BOD **Accept:** 'dynamometer' on its own = BOD **Accept:** grip dynometer (or other similar misspellings) as BOD
2	**(a)**	**(i)**	One mark for: (Left knee) extension	**1** AO1	**Do not accept:** straight or versions of this word = TV **Do not accept:** extension **and** flexion **Accept:** flexion **to** extension = ✓ **Accept:** extend / extended
		(ii)	One mark for: Third / 3 (class lever)	**1** AO2	**N.B.** The word 'class' is not required as it is in the question.
3	**(a)**		One mark for: Low / moderate / medium (intensity)	**1** AO1	**Do not accept:** calm = TV **Accept:** equivalent terms, e.g. light / slow / steady = ✓

3	**(b)**		Two marks for two of: 1. Helps the body's transition back to a resting state **OR speeds up** recovery 2. **Gradually** lowers heart rate **OR** maintains elevated heart rate 3. **Gradually** reduces blood pressure 4. Maintains circulation of blood / oxygen 5. **Gradually** reduces breathing rate **OR** maintains elevated breathing rate 6. **Gradually** reduces body / muscle temperature **OR** maintains elevated body / muscle temperature 7. **Speeds up** removal of waste products / lactic acid 8. Reduces the risk of **muscle** soreness / aching muscles / DOMS / stiffness 9. Reduces the risk of blood pooling 10. Reduces the risk of damage to joints 11. Reduces the risk of fainting / lightheadedness / nausea	**2** AO2	**Mark first two responses only (see Point 5 in Marking Instructions – Short Answer Questions)** **If 2 correct benefits given under 1 on scaffold credit both.** **If a wrong answer is given under 1 but 2 correct benefits are given under 2, one mark only** **Do not accept:** Lowers heart rate or breathing rate or body temperature without 'gradually' or equiv = TV. **Do not accept:** prevents / reduces build-up of lactic acid = TV **Do not accept:** removes lactic acid = TV (must say speeds up / helps or equiv.) **Do not accept:** reduce muscle fatigue = TV **Do not accept:** Gets oxygen into body = TV **Do not accept:** Reduces oxygen debt = TV **Do not accept**: reduced risk of injury = TV **N.B.** For pt. 8-11 use BOD for prevent / stop, e.g. prevent blood pooling = BOD
4	**(a)**	**(i)**	One mark for: Alveoli	**1** AO1	**Accept:** phonetic spellings **Accept:** alveolus = ✓
	(a)	**(ii)**	One mark for: (Oxygen diffuses) into capillaries / blood / red blood cells / haemoglobin	**1** AO1	**Do not accept:** 'out / outwards' on its own = TV (answers must say where O_2 goes **to**) **Do not accept:** oxygen goes to the heart = TV

<table>
<tr>
<td></td><td>(a)</td><td>(iii)</td>
<td>One mark sub-max for feature:
One mark sub-max for function:

<table>
<tr><th></th><th>Feature</th><th></th><th>Function</th></tr>
<tr><td>1.</td><td>Thin walls / one-cell thick / semi-permeable</td><td>2.</td><td>Small distance for oxygen / carbon dioxide / gases to pass through faster OR more efficient / faster gaseous exchange / diffusion</td></tr>
<tr><td>3.</td><td>Surrounded by capillaries</td><td>4.</td><td>To provide blood for gaseous exchange / diffusion</td></tr>
<tr><td>5.</td><td>Large surface area OR large number of alveoli</td><td>6.</td><td>more gases / oxygen / CO_2 can pass through OR more efficient gaseous exchange / diffusion</td></tr>
<tr><td>7.</td><td>Walls of alveoli are moist</td><td>8.</td><td>Gases dissolve to pass through OR more efficient gaseous exchange / diffusion</td></tr>
<tr><td>9.</td><td>Walls of alveoli contain elastic fibres</td><td>10.</td><td>Allows the walls to increase surface area slightly during inspiration</td></tr>
</table>
</td>
<td>2

AO1</td>
<td>N.B. Mark 1st feature described only. If more than one feature is described, only mark the function of the first feature.
Function cannot be credited unless feature is marked as correct.
If feature is correctly identified in function it may be credited as long as a different answer for feature has not already been marked

Do not accept: features of capillaries = IRRL
Do not accept: ‘thin’ on its own = TV
Do not accept: surrounded by a capillary = TV

Accept: ‘membrane’ = BOD 1
Accept: allows for diffusion / gas exchange = BOD 2 or 8 but TV for 4 and 6
Accept: ‘more blood at the alveoli’ = BOD 4</td>
</tr>
<tr>
<td>5</td><td></td><td></td>
<td>Two marks for two of:

1. (Wearing / using) personal protective equipment / PPE OR e.g. knee / elbow pads / ankle supports / gumshield
2. (Wearing / using) correct clothing / suitable / supportive footwear OR e.g. volleyball shoes with grip / to absorb impact of landings
3. Having an appropriate level of competition OR e.g. players or teams of similar standard
4. Lifting / carrying / using equipment safely OR e.g. 2 people to carry posts / ball trolleys
5. Completing risk assessments or safety checks OR e.g. check court / floor is not wet / slippery / no jewellery / hair tied back</td>
<td>2

AO2</td>
<td>Do not accept: Warming up (in question) or reference to warm up components = REP or cooling down (question states before the activity) = X
Do not accept: hydration / sleep = TV
Do not accept: fair play / sportsmanship / play by rules = TV (not <u>before</u> a game)
Do not accept: unused equipment not put away = TV
Do not accept: protective footwear = TV
Do not accept: use correct techniques = TV (not <u>before</u> a game)

Accept: Knee / medical tape = BOD 1
Accept: Examples on their own, e.g. knee pads = ✓ 1
Accept: correct equipment = BOD 1
Accept: equipment set up properly = BOD 5</td>
</tr>
</table>

6	**(a)**	**(i)**	One mark for: De-oxygenated	**1** AO1	
	(a)	**(ii)**	One mark for one of: 1. Thin walls 2. Large diameter **OR** wide / large lumen 3. Does not have valves	**1** AO1	**Do not accept:** Has valves = X **Do not accept:** 'lumen' on its own = TV **Do not accept:** thick lumen = TV **Do not accept:** Carries (deoxygenated) blood (in question 6ai) or carries blood under low pressure (not a structure) **Do not accept:** large surface area = TV
7			One mark for: **C** Vasoconstriction	**1** AO1	
8			One mark for: (Freely) moveable joint **OR** a joint that **allows** movement	**1** AO1	**Do not accept:** contains synovial fluid / cartilage = TV **Do not accept:** definitions of a joint, e.g. where 2 bones meet **Do not accept:** 'movement at a joint' = TV
9			One mark for: Lactic acid	**1** AO1	**Accept:** lactate
10			Two marks for: 1. The **frontal** plane runs vertically and divides the body into front and back sections. 2. A **star jump** is a practical example of a movement taking place in this plane.	**2** AO3	

11			One mark for: Deltoid	**1** AO1	**Accept:** Trapezius / trapezium = BOD
12	**a**		One mark for one of: 1. Slippery / wet surface / water / ice / frozen 2. Litter / glass / stones / faeces / stumps / wickets / bails / ball / bags / equipment 3. Uneven / damaged surface / holes / bare patches 4. Hard surface 5. Sightscreen / boundary rope / boundary flags	**1** AO2	**Mark 1st response only** **N.B.** The question says on the surface of the cricket pitch, **not** the cricket ground. **Do not accept:** the effects of a hazard, e.g. Astro burn **Do not accept**: answers that are not found on the surface of an artificial pitch or are found off the pitch. **Do not accept:** short run-off (or equivalent) = TV **Do not accept:** footwear / spikes = TV **Do not accept:** sharp objects = TV **Accept:** tree (as a few pitches have a tree on pitch)
	b		One mark for one of: 1. Slippery / wet surface / water / muddy / ice / frozen 2. Litter / glass / stones / faeces / stumps / wickets / bails / ball / bags / equipment 3. Uneven / damaged surface / holes / bowlers footmarks 4. Hard surface 5. Sightscreen / boundary rope / boundary flags	**1** AO2	**Mark 1st response only** **Do not accept:** Same response for 12 a (questions states different hazards) but answers can be from the same marking point **Do not accept:** 'grass' on its own (in question) = **REP** **Do not accept:** Hay fever / pollen = TV (not on surface) **Do not accept:** short run-off (or equivalent) = TV **Do not accept:** footwear / spikes = TV **Do not accept:** sharp objects = TV **Accept:** overgrown grass / clumps of grass / mole hills = ✓ pt. 3 **Accept:** tree (as a few pitches have a tree on pitch)
13			One mark for:	**1** AO1	**N.B.** Drowning is a risk, not hazard

			False		

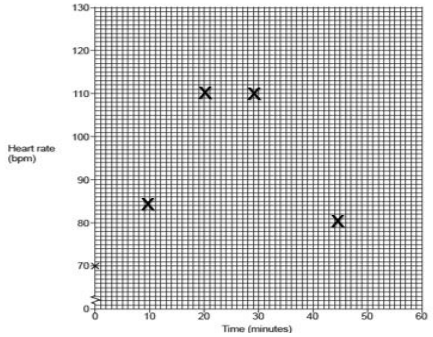
14			One mark for: Increased bone density **OR** stronger bones **OR** reduced risk of osteoporosis **OR** bones stay strong **OR** improve bone marrow **OR** increase blood cell production	**1** AO1	**Do not accept:** Healthy bones (in question) use **REP** **Do not accept:** reduced risk of arthritis (question is about bones, not joints) = TV **Do not accept:** Increased mineral storage = TV **Accept:** (opposites, e.g.) stops bones becoming weak / brittle = BOD
15			One mark for: They are flexible / elastic **OR** they can stretch	**1** AO1	**Accept:** references to range of movement or allows movement = BOD
16			One mark for: **D** Tibia	**1** AO1	
17			One mark for: (Examples include but are not limited to:) sprinting / running / forward roll / biceps curl / kicking a football / heading a football / football throw-in / cycling / sit up / burpees / squats / deadlift / tumble turn / chest pass	**1** AO3	**Mark 1st response only** **Do not accept:** somersault (in question) or front flip or back flip **Use REP** **Do not accept:** sports skills that have movements in other planes as well, e.g. tennis serve / cricket bowling / diving / throwing a ball / flat spin are all TV **Do not accept:** balances, e.g. handstand **Do not accept:** passing / shooting / throwing on its own = TV **Accept:** sports skills where the only movements are **flexion / extension** at joints
18			One mark for:	**1** AO3	

			Longitudinal		

19			One mark for (practical example applied to training for a sprinter): **Increase** the number of sprints **OR** increase the number of reps / sets **OR increase** the weight / resistance / distance / speed run **OR decrease** recovery time **between** sprints / reps / sets	**1** AO2	**Do not accept:** Response with no practical example, e.g. no reference to sprints / weights / reps or equivalent **Do not accept:** Responses to other sports / activities even if correct e.g. a body builder increases the amount of weight they lift = TV (question is for a sprinter) **Do not accept:** make exercises harder = TV **Do not accept:** use overload = TV **Do not accept:** Increase frequency / time / duration (different components of FITT) = TV **Do not accept:** sprint for longer = TV (duration) **Do not accept:** change in terrain = TV (must show an increase in intensity) **Accept:** increase gradient or greater resistance from the ground, e.g. run in water / on sand. **Accept:** sprint for a faster time = BOD
20			One mark for: **B**	**1** AO1	

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**	**(i)**	One mark for: 2 **OR** Finley **AND** Li	**1** AO3	
		(ii)	One mark for: Zayn	**1** AO3	
		(iii)	One mark for: Finley	**1** AO3	
		(iv)	One mark for: Cooper 12-minute run / walk (test)	**1** AO1	**Do not accept:** multi-stage fitness test or bleep / beep test. Use **REP** **Do not accept:** Running round a track = TV **Accept:** 'Cooper test' 'Cooper run' and '12-minute run' as BODs **Accept:** Cooper 10-minute run (or other time) = BOD **Accept:** other suitable tests of stamina.
	(b)		Two marks for two of: 1. Lack of effort / motivation / drive **OR** trained at lower intensity **OR** trained less **OR** didn't train **OR** poor attitude / poor work ethic 2. (Unable to train) due to injury / illness / other commitments 3. Fitter players may make less improvement **OR** some players already have high (fitness) levels 4. Lack of (SMART) goals **OR** chose to focus on a different fitness component, e.g. strength 5. Errors made in data collection / recording of results	**2** AO3	**Do not accept:** 'different playing positions' = TV **Do not accept:** different starting points / obese = TV **Do not accept:** stamina may be close to their best = TV **Accept:** opposite arguments for pt. 1, e.g. some put in more effort or 'different amounts of effort' = ✓ 1 **Accept:** 'injury' on its own = BOD 2 **Two marks for:** e.g. 'trained less hard due to injury' or 'didn't train due to injury' = ✓ ✓ 1 and 2

	(c)		Four marks for: 1. (Specificity) training should be **relevant** / **suited** / **appropriate** / **targeted** to (**one of**:) performer's sport / performer's needs / energy system used / muscle groups used / area of the body / fitness component / stroke 2. (example) targeting the main muscle groups in arms to improve front crawl **OR** training in the swimming pool **OR** focusing on front crawl **because** that is your event / race 3. (Progression) training should become **gradually** / **slowly** more demanding **OR** a **gradual** / **slow** increase in intensity 4. (example) Doing more repetitions of lengths in the pool **OR** increase number of (swimming) sessions per week	**4** 2 x AO1 2 x AO2	**N.B.** descriptions of training principles **do not** have to be applied to swimming, **but the examples must be**. **N.B. mark can be given for example if the description of the principle is not credited** Where there is repetition of the name of each principle, e.g. training must be **specific** to the sport or training must **progress** in difficulty, put **REP** above the word. The answer may still be credited if correct, e.g. 'Meeting specific (REP) demands of the sport' = ✓ 1 **Do not accept:** gradually increase level = TV **Do not accept:** 'do front crawl' on its own = TV. For pt 2 answer must have some explanation **to show why** you might do front crawl. **Do not accept:** examples of specificity that say what you don't do, e.g. 'don't do backstroke if you are a front crawl swimmer' = TV **Accept:** target the area you want to improve = BOD 1 **Accept:** focus on breaststroke leg kick = BOD 2 **Accept:** Long / short distance swimmer doing long / short distance training = BOD 2 **Accept:** swim for longer = BOD 4

22	**(a)**		Four marks for: 1. 85 bpm at 10 minutes 2. 110 bpm at 20 minutes 3. 110 bpm at 30 minutes 4. 80 bpm at 45 minutes **OR** 15 minutes after 3rd point plotted and at 80 bpm	**4** AO3	**N.B.** If points are plotted correctly ignore any lines that may be drawn incorrectly.  Annotations must be close to each plotted point. Do not credit / annotate plotted point at 70 bpm.
	(b)	**(i)**	Three marks for three of: 1. **Increase** in stroke volume **OR more** blood pumped out of the heart **per beat** 2. **Increase** in cardiac output **OR more** blood pumped out of the heart **per minute** 3. **Increase** in blood flow / oxygen transport / oxygen delivery 4. Vascular shunt **OR** vasodilation of blood vessels to muscles **OR** vasoconstriction of blood vessels to other organs **OR** less blood to other organs 5. **Increase** in **blood** pressure 6. **Increase** in **blood** lactate / lactic acid / CO_2 **OR decrease** in **blood** ph 7. **Increase** in **blood** temperature 8. Blood vessels near skin dilate	**3** AO2	**N.B.** short-term effects must be to **cardiovascular system** so blood is a key word in pts. 5-7. Use **IRRL** for references to other systems **Do not accept:** long-term adaptations to training = **IRRL** **Do not accept:** increase in heart rate (in question) use **REP** **Do not accept:** heart works harder = TV **Do not accept:** increase in (body) temperature = TV **Do not accept:** stronger blood flow = TV **Do not accept:** more gas exchange (respiratory or muscular system) = IRRL **Accept:** more deoxygenated blood to heart = BOD 3

<table>
<tr>
<td></td>
<td>(b)</td>
<td>(ii)</td>
<td>Three marks for three of:

1. Increase in tidal volume OR increased depth of breathing
2. Increase in minute volume / minute ventilation
3. Respiratory / intercostal / diaphragm muscles work harder / contract stronger / contract faster
4. Increase in gaseous exchange / diffusion
OR increase in concentration gradient
OR more oxygen breathed in
OR more carbon dioxide breathed out</td>
<td>3

AO2</td>
<td>Do not accept: increase in breathing rate or faster breathing or shortness of breath (in question) use REP
Do not accept: references to other systems, e.g. more oxygen to working muscles (circulatory or muscular) = IRRL
Do not accept: long-term adaptations to training, e.g. increase in lung capacity = IRRL
Do not accept: lungs work harder = TV
Do not accept: oxygen debt = TV
Do not accept: fatigue in respiratory muscles = TV
Accept: more air taken in or larger thoracic cavity = BOD 1
Accept: increase in respiratory muscle temperature = BOD 3</td>
</tr>
<tr>
<td>23</td>
<td>(a)</td>
<td>(i)</td>
<td>Two marks for two of:

<table>
<tr><th></th><th>Aerobic (exercise)</th><th>Anaerobic (exercise)</th></tr>
<tr><td>1.</td><td>Uses / requires oxygen OR no oxygen debt</td><td>No / little / not enough oxygen used / required OR oxygen debt created</td></tr>
<tr><td>2.</td><td>Continuous exercise OR 3+ minutes</td><td>Short bursts of exercise OR up to 30 seconds</td></tr>
<tr><td>3.</td><td>Low / moderate intensity</td><td>High intensity</td></tr>
<tr><td>4.</td><td>No lactic acid produced OR CO_2 / H_2O produced</td><td>Lactic acid produced</td></tr>
</table>
</td>
<td>2

AO1</td>
<td>Each answer must show a difference by stating both sides of one point in the table

Accept: aerobic is long/er duration AND anaerobic is short/er duration = BOD 2
Accept: aerobic is lower intensity AND anaerobic is higher intensity = BOD 3</td>
</tr>
</table>

		(ii)	Two marks for: 1. (Aerobic event) 800m / 1500m / 3000m / 5000m / 5k(m) / 10000m / 10k(m) / steeplechase / **race** walking 2. (Anaerobic event) 60m / 100m / 200m / 300m / 400m / hurdles / long jump / triple jump / high jump / pole vault / javelin / shot / discus / hammer	**2** AO2	**Do not accept:** distances between 401 – 799m = TV (50:50 aerobic: anaerobic) **Do not accept:** 'sprint' 'sprinting' 'short distance running' 'walking' on its own = TV **Do not accept**: long distance running / triathlon / parkrun / cycling / swimming / rowing or games activities = TV **Do not accept:** if units make the answer wrong, e.g. 800cm = X **Accept:** any correct distance given without metres, e.g. 1500 = BOD (but not 5 or 10 without kilometres / k) **Accept:** relay = ✓ 2 **Accept:** 800m sprint / 1500m sprint = BOD 1 **Accept:** mile / marathon / cross country = BOD 1 **Accept as aerobic:** any distance 800m+ = BOD 1 **Accept as anaerobic:** any distance 50 – 400m = BOD 2

Level 3 (5–6 marks)
- detailed knowledge & understanding
- clear and consistent practical application of knowledge & understanding
- effective analysis/evaluation and/or discussion/explanation/development
- relevant information drawn upon from other areas of the specification
- accurate use of technical and specialist vocabulary
- there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

Level 2 (3–4 marks)
- satisfactory knowledge & understanding
- some success in practical application of knowledge & understanding
- analysis/ evaluation and/or discussion/explanation/development attempted with some success
- some relevant information drawn upon from other areas of the specification
- technical and specialist vocabulary used with some accuracy
- there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Level 1 (1–2 marks)
- basic knowledge & understanding
- little or no attempt at practical application of knowledge & understanding
- little or no attempt to analyse/ evaluate and/or discuss/explain/develop
- little or no relevant information drawn upon from other areas of the specification
- technical and specialist vocabulary used with limited success
- the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.

(0 marks)
- no response or no response worthy of credit.

Level 3 Discriminators
- detailed knowledge & understanding of long-term benefits of exercise on the cardiovascular system and the emotional and social consequences of sedentary lifestyle
- long-term benefits of exercise on the cardiovascular system are explained
- different emotional and social consequences are described and supported with relevant practical examples
- all AOs are well covered for Level 3; some imbalance between them may be present for 5 marks. At 6 marks, both are equally well addressed

Level 2 Discriminators
- satisfactory knowledge & understanding of long-term benefits of exercise on the cardiovascular system and the emotional and social consequences of sedentary lifestyle
- some long-term benefits of exercise on the cardiovascular system may be explained and some may only be described
- some emotional and social consequences are described with some examples
- some success at more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks)

Level 1 Discriminators
- basic knowledge & understanding long-term benefits of exercise on the cardiovascular system and the emotional and/or social consequences of sedentary lifestyle
- few emotional and social consequences described with few examples
- responses only demonstrating AO1 knowledge and understanding are Level 1

Q23 (b)* Indicative content (6 marks - 2 x AO1, 2 x AO2, 2 x AO3)	AO1 = numbered points (KU), AO3 = bullet points (DEV), AO2 = E.g. (EG)
(long-term benefits of exercise on the cardiovascular system) 1. **Lower <u>resting</u>** heart rate • Bradycardia • Heart doesn't need to work as hard / more efficient 2. **Larger / stronger** heart **OR** (cardiac) hypertrophy • Stronger contractions 3. **Increase** in stroke volume • At rest and high intensity • More blood pumped from the heart in one beat 4. **Increase** in **<u>maximum</u>** cardiac output • Higher volume of blood ejected from left ventricle in one minute **during high intensity exercise** 5. **Capillarisation OR Increased** capillary density • Improved circulation • Greater surface area for gaseous exchange **OR** more efficient / faster diffusion • More oxygen to muscles **OR** faster removal of CO_2 / lactic acid 6. **More efficient** vascular shunt mechanism • More blood to (working) muscles / body (credit **once (DEV)** in relation to any of pts. 2, 3, 4, 5 or 6) 7. **Lower** blood pressure • Less strain on the heart / blood vessels • Reduced risk of heart complications / strokes / heart attacks 8. **Increase** in red / white blood cells • (red) more haemoglobin / haemocrit • (red) Increased oxygen carrying capacity to supply working muscles • (white) better able to fight infections / disease 9. **Increased** plasma / blood volume • Decrease in blood viscosity • Blood flow is easier through blood vessels 10. **Faster / shorter** recovery rate • Heart rate returns to resting value faster after exercise • Performer will recover quicker from playing sport / training	Do not credit: increased cardiovascular endurance / stamina (tenuous link to question. Question is limited to benefits on CV system) Do not credit opposites, e.g. benefits of an active lifestyle. Use SEEN **N.B.** Physical health issues may lead to emotional / social consequences, e.g. obesity. These can be credited with **EG** if linked to an emotional / social consequence. (emotional consequences of a sedentary lifestyle) 11. Poor mental health / depression / anxiety / wellbeing E.g. unable to benefit from release of endorphins / serotonin from exercise 12. Low self-esteem / confidence **OR** increased self-doubt E.g. No experience of success or competition **OR** feel unable to participate in sport 13. Poor self-image / body image E.g. due to being unfit / obese or overweight / lack of muscle tone 14. Poor stress management **OR** unable to relieve tension E.g. not playing sport to take mind of other stresses **OR u**nable to channel aggression / frustration / relax / unwind / gain catharsis through exercise (social consequences of a sedentary lifestyle) 15. Loneliness **OR** isolation E.g. - Unable to make new friends with other members of a sports team / club 16. Feeling of not belonging to a group E.g. – Not a member of sports team / club 17. Lack of friendships **OR** no common experience (with others) E.g. – Unable to share sporting experiences / sporting success 18. Interests are inactive / do not support healthy lifestyle E.g. - Prefer own company / couch potato syndrome / watching TV / computer games **OR** copy friends who have sedentary lifestyles

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on

01223 553998

Alternatively, you can email us on

support@ocr.org.uk

For more information visit

ocr.org.uk/qualifications/resource-finder

ocr.org.uk

Twitter/ocrexams

/ocrexams

/company/ocr

/ocrexams

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT

OCR is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored. © OCR 2023 Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA.

Registered company number 3484466. OCR is an exempt charity.

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up-to-date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please contact us.

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our Expression of Interest form.

Please get in touch if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.

OCR
Oxford Cambridge and RSA

Thursday 8 June 2023 – Morning

GCSE (9–1) Physical Education

J587/02 Socio-cultural issues and sports psychology

Time allowed: 1 hour

No extra materials are needed.

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

INSTRUCTIONS
- Use black ink.
- Answer **all** the questions.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **12** pages.

ADVICE
- Read each question carefully before you start your answer.

© OCR 2023 [601/8442/5]
DC (ST) 308774/4
OCR is an exempt Charity

Section A

1 Taking banned performance-enhancing drugs is a practical example of deviance in sport.

Give **one** other practical example of deviance in sport.

.....

..... **[1]**

2 Suggest **two** ways a role model can have a **positive** effect on participation in physical activity and sport.

1 .....

.....

.....

2 .....

.....

.....

[2]

3 Explain how schools can have **negative** effects on participation in physical activity and sport.

.....

.....

.....

..... **[2]**

4 Describe **two** ways **religion/culture** can influence participation in sport and physical activity.

1 .....

.....

2 .....

.....

[2]

© OCR 2023

5 Which **one** of the following is an example of a local authority improving **access** to physical activity and sport?

Put a tick (✓) in the box next to the correct answer.

A Give out leaflets for coaching courses in a school assembly. ☐

B Increase the number of lifeguards at the local swimming pool. ☐

C Provide more free coaching sessions for children. ☐

D Set up a new bus route that stops at the local leisure centre. ☐

[1]

6 Male sport has more media exposure than female sport.

Is this statement **true** or **false**?

..... **[1]**

7 Identify **one** physical activity or sport where the use of beta blockers may **improve** performance.

..... **[1]**

8 Stimulants are mainly used to increase muscle growth.

Is this statement **true** or **false**?

..... **[1]**

9 Give **one** practical example of a coordinated movement in a sport.

..... **[1]**

10 Define the term motor skill.

..... **[1]**

© OCR 2023

11 Which **one** of the following identifies the characteristics of skilful movement?

Put a tick (✓) in the box next to the correct answer.

A Aesthetic, fluent, predetermined ☐

B Aesthetic, fluent, progressive ☐

C Fluent, predetermined, strong ☐

D Fluent, knowledgeable, predetermined ☐

[1]

12 The scoring percentage of a basketball player is tested on a regular basis.

The table below shows the scoring success percentages from five tests.

Test 1	Test 2	Test 3	Test 4	Test 5
51%	54%	55%	61%	64%

Use the data from the table to answer the questions.

Identify the consecutive tests which show the **least** improvement.

Between test ..... and test .....

Identify the consecutive tests which show the **most** improvement.

Between test ..... and test.....

Calculate the total percentage improvement from test 1 to test 5.

.....%

[3]

© OCR 2023

13 The SMART principle of goal setting is used to help improve performance.

A runner has a personal best of 2 minutes and 30 seconds.

By the end of July they want to reduce this time by 2 seconds.

Use your knowledge of SMART goal setting to complete the table below.

SMART principle	Practical Application
Specific	The goal is to reduce the personal best to 2 min 28 sec.
Measurable	
Achievable	
Recorded	
Time Phased	The goal is to be achieved by the end of July.

[3]

14 What is mental rehearsal?

.....

..... **[1]**

15 Give one practical example of how a sports performer can use **positive** thinking to improve their performance.

.....

..... **[1]**

16 Define the term well-being.

.....

..... **[1]**

© OCR 2023

17 Using practical examples, describe **two emotional** benefits of participating in physical activity.

1 .....

.....

2 .....

.....

[2]

18 Loneliness is one negative consequence of a sedentary lifestyle on social health.

Describe **two** other negative consequences of a **sedentary** lifestyle on **social** health.

1 .....

.....

2 .....

.....

[2]

19 Fibre, minerals and protein are all components of a balanced diet.

State **two other** components of a balanced diet.

1 .....

2 .....

[2]

20 State a good food source of fibre.

..... **[1]**

© OCR 2023

Section B

21 A sports coach will use different types of guidance and feedback to help development.

(a) Identify **two** advantages of using **mechanical** guidance when improving motor skills.

1 .....

.....

2 .....

.....

[2]

(b) **(i)** Give **two** practical examples of **manual** guidance.

1 .....

.....

2 .....

.....

[2]

(ii) Identify **two disadvantages** of using **manual** guidance.

1 .....

.....

2 .....

.....

[2]

© OCR 2023

(c) Define what is meant by **extrinsic** and **intrinsic** feedback.

Give a practical example of each.

Definition of extrinsic feedback

.....

.....

Practical example of extrinsic feedback

.....

.....

Definition of intrinsic feedback

.....

.....

Practical example of intrinsic feedback

.....

.....

[4]

22 **(a)** Give **two** different examples of **good** sportsmanship in physical activity and sport.

1 .....

.....

2 .....

.....

[2]

(b) Explain **two** ways gamesmanship might be used to gain a competitive advantage.

1 .....

.....

2 .....

.....

[2]

© OCR 2023

(c) Describe **one** negative impact performance-enhancing drugs can have on a sport and a sports performer.

Negative impact on a **sport**

.....

.....

Negative impact on a **sports performer**

.....

.....

[2]

(d) **Evaluate** the influence of newspapers on participation and performance in physical activities and sport.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... **[4]**

© OCR 2023

23 (a) Explain the importance of **minerals** and **proteins** in a balanced diet.

Minerals .....

.....

.....

.....

Proteins .....

.....

.....

.....

[4]

(b)* Interruptions in physical activity often result in inactivity causing reversibility.

Describe how regular training **benefits** physical health.

Using practical examples, evaluate **continuous** training and **weight** training. **[6]**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

© OCR 2023

.....

.....

.....

.....

.....

.....

.....

.....

END OF QUESTION PAPER

© OCR 2023

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

OCR
Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of Cambridge University Press & Assessment, which is itself a department of the University of Cambridge.

© OCR 2023

GCSE

Physical Education

J587/02: Socio-cultural issues and sports psychology

General Certificate of Secondary Education

Mark Scheme for June 2023

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

© OCR 2023

MARKING INSTRUCTIONS

PREPARATION FOR MARKING
SCORIS

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: Scoris Assessor Online Training; OCR Essential Guide to Marking.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3. Log-in to scoris and mark the 10 practice responses ("scripts") and the 10 standardisation responses

YOU MUST MARK 10 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the Scoris 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the Scoris messaging system, or by email.

5. **Crossed Out Responses**

   Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

Rubric Error Responses – Optional Questions

Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM assessor, which will select the highest mark from those awarded. (The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)

Contradictory Responses

When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only one mark per response)

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. (The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)

Short Answer Questions (requiring a more developed response, worth two or more marks)

If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Longer Answer Questions (requiring a developed response)

Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add a tick to confirm that the work has been seen.

7. Award No Response (NR) if:

- there is nothing written in the answer space

Award Zero '0' if:

- anything is written in the answer space and is not worthy of credit (this includes text and symbols).

Team Leaders must confirm the correct use of the NR button with their markers before live marking commences and should check this when reviewing scripts.

8. The scoris **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**
If you have any questions or comments for your team leader, use the phone, the scoris messaging system, or e-mail.

9. Assistant Examiners will send a brief report on the performance of candidates to your Team Leader (Supervisor) by the end of the marking period. The Assistant Examiner's Report Form (AERF) can be found on the RM Cambridge Assessment Support Portal (and for traditional marking it is in the Instructions for Examiners). Your report should contain notes on particular strength displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10. For answers marked by levels of response:
a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
b. **To determine the mark within the level**, consider the following:

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

11. Annotations used in the detailed Mark Scheme

Screen Annotation	Meaning	Description/when to use
	Tick	A correct answer that deserves a mark
	Cross	A factually incorrect answer
BOD	Benefit of doubt	An answer that deserves the benefit of the doubt (must be accompanied by a tick)
TV	Too vague	An answer that is too vague to gain credit
REP	Repeat	A repeat of an answer that has already been credited
IRRL	Irrelevant	Significant amount of material which doesn't answer the question
SEEN	Seen	Seen by examiner but no credit given / indicates that an answer continues after a sub-max has been reached
BP	Blank page	Blank page (for any page with no candidate writing on it)
KU	Knowledge/Understanding	Knowledge and understanding / indicates AO1 on extended response Q (*)
EG	Example	Example/Reference / indicates AO2 on extended response Q (*)
DEV	Development	Development / indicates AO3 on extended response Q (*)
L1	Level 1	Level 1 response on extended response Q (*)
L2	Level 2	Level 2 response on extended response Q (*)
L3	Level 3	Level 3 response on extended response Q (*)
S	Sub-max	This indicates that a sub-max has been reached

- **KU**, **EG** and **DEV** are used instead of ticks on the extended response question to indicate where knowledge or development points from the indicative content have been made.
- On the extended response question (*), one **KU**, **EG** or **DEV** does not mean one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

Section A					
Question			**Answer**	**Marks**	**Guidance**
1			1 mark from: Practical examples that show **cheating/deliberately breaking rules** : e.g. entering a lower score on scorecards in golf, diving in football, time wasting in a hockey game **Violence :**e.g. fighting in football / attacking/abusing an official **Illegal activity:** eg Illegal betting / match fixing in football / cricket	**1** 1 x (AO2)	**Answer can only be credited if there is reference to a specific sport /activity/ sporting performers/officials/opponent** **Do not accept:** Single word answers e.g. cheating **Do not accept:** taking drugs – REP
2			2 marks from: **(Positive**) 1. Good behaviour is copied 2. Inspires /increases/encourages participation. 3. Introduce others to new sports/activities 4. Promotes good sportsmanship to younger performers.	**2** 2 x (AO1)	**Do not accept**: gives motivation - TV
3			2 marks from: **Negative effect** 1. (Overall experience) A negative experience in PE can decrease likelihood of participation 2. (extra curricular clubs) Schools who provide poor/few extracurricular clubs may decrease participation 3. (facilities) Schools which provide few/poor facilities/equipment may decrease participation 4. (exam/workload) Pupils may not have time to participate due to school/exam pressure/workload 5. (transport) pupils may not be able to stay afterschool as they have to get the bus home 6. (teachers) Lack of qualified staff 7. (limited number of sports) narrow curriculum/ limited range of sports	**2** 2 x (AO3)	**Accept:** negative experience with teacher - Pt 1

Section A					
Question			**Answer**	**Marks**	**Guidance**
4			2 marks from: 1. Some have traditional sports/activities that are encouraged/banned e.g. cricket is popular amongst some Asian cultures 2. Some feel that certain activities should not be performed by specific genders 3. Some have dress codes that make participation more difficult/ women wearing hijabs or men wearing turbans 4. Some expect worship/prayer/festivals at specific times, preventing participation at those times. 5. Some cultures have high expectations of commitment to work/study/ family.	**2** 2 x (AO1)	
5			1 mark: **(D)** Set up a new bus route that stops at the local leisure centre	**1** 1 x (AO1)	
6			1 mark: **TRUE**	**1** 1 x (AO1)	
7			1 mark from: Accept any activity that require movements executed calmly and under control Examples: Archery, shooting, diving, snooker/pool/billiards, gymnastics, golf, darts	**1** 1 x (AO1)	**Do not accept:** weight lifting
8			1 mark: **FALSE**	**1** 1 x (AO1)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
9			1 mark: Accept responses that indicate the performer uses different body parts together effectively. • Tennis/badminton/squash/table tennis serve(s) • Pole vault/high/jump/triple jump • Lay up in basketball • Spike in volleyball • Gymnastic landing a backflip on a beam • Somersault	**1** 1 x (AO2)	**Do not accept:** The name of a sport /activity **Accept**: a named skill eg a lay up **Accept:** running, jumping, throwing – BOD **Accept** : Gymnastic/skating routine
10			1 mark: An action/task/skill that involves (body/limb) movement/movements	**1** 1 x (AO1)	**Do not accept:** Movement as a single word answer. **Accept**: learned movement/ movement skill
11			1 mark: (A) Aesthetic, fluent, predetermined	**1** 1 x (AO1)	
12			3 marks: (1 mark for each) Test 2 and Test 3 Test 3 and Test 4 13 (%)	**3** 3 x (AO3)	**Accept:** if percentages are referred to - **BOD** Between 54 and 55 (test 2 and 3) Between 55 and 61 (test 3 and 4)

Section A					
Question			**Answer**	**Marks**	**Guidance**
13			3 marks: 1 mark for each of: (M – Measurable) The goal can be measured by time / they are improving their time /the time is 2 seconds quicker (A – Achievable) Previous PB is close/near to new goal/within performers limits /it's only a 2 second improvement (R – Recorded) The goal/progress can be written down/logged	**3** 3 x (AO2)	**Answers need to include reference to practical application** **Do not accept:** measured, achievable, recorded – REP **M-** must refer to time (mins/secs) and quantity that is measured **Accept: A** – isn't too challenging or too easy - BOD
14			1 mark for: Mental rehearsal is: A technique involving a performer practicing a skill in their head/mind before physically executing it.	**1** 1 x (AO1)	**Do not accept**: any reference to mental – Rep of question.
15			1 mark: Accept any situation where a performer is using 'self talk' to help a successful performance. Example: A hockey player telling themselves that they can score a penalty flick in hockey.	**1** 1 x (AO2)	**Answer can only be credited if there is reference to a specific sport /activity/ sporting performers/officials/opponent** **Do not accept:** a player **thinking** they can score in a game/win
16			1 mark: A state of completeness/ being comfortable/contented, happy, prosperous (and healthy).	**1** 1 x (AO1)	

Section A					
Question			**Answer**	**Marks**	**Guidance**
17			2 marks from: (self esteem/confidence**)** 1. exercise can give you a sense of achievement/accomplishment/ increase motivation 2. increase in confidence/self esteem 3. physical activity makes you feel better/happier/reduce anxiety/help combat depression (Stress management) 4. stress is managed more effectively 5. stresses of everyday life can be forgotten/released (Image) 6. improved body image/ active people are more likely to have good levels of self-image 7. They look good to themselves/others	**2** 2 x (AO2)	**Answer can only be credited if there is reference to a specific sport /activity/ sporting performers/officials/opponent** **Do Not Accept:** The single word 'sport' or 'exercise' as a description.
18			2 marks: 1. Lack of friends /fewer friends /small friendship group/limited opportunity/ confidence to make friends/ no common experience with others 2. Have few social skills/communication skills. 3. Not belonging to a group / lack of sense of belonging / feeling isolated / left out/ not part of community	**2** 2 x (AO2)	**Do not accept:** Loneliness (in question) **Do not accept:** prevents benefit of teamwork – TV **Do not accept:** anxiety or social anxiety - TV
19			2 marks: 1. Carbohydrates 2. Fats 3. Vitamins 4. Water	**2** 2 x (AO1)	**Accept:** Carbs – Pt 1
20			1 mark from: Fruit or an example of a fruit / Vegetables or an example of a vegetable/Oats/	**1** 1 x	**Accept:** relevant and valid examples of any food containing fibre

Section A					
Question			**Answer**	**Marks**	**Guidance**
			Cereals/Wheat/ Beans /Lentils/ Wholemeal bread/nuts /other relevant egs	(AO1)	**Do not accept:** Bread or white bread

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**		2 marks from: 1. Can reduce fear in a dangerous/new situation 2. Can be safer for the performer/less risk of injury 3. Can increase confidence for the performer 4. Gives kinaesthetic feel to the performer	**2** 2 x (AO1)	**Do not accept**: improve skills – REP **Do not accept**: makes skills easy to learn - TV
21	**(b)**	**(i)**	2 marks: Examples: 1. A swimming coach holding a learner in the correct position in a pool 2. A rugby coach helping a player get into a good position by scrummaging against them 3. A golf coach holding the arms of a golfer to improve their swing 4. A gymnastics coach supporting the gymnast's position in a vault/floor balance	**2** 2 x (AO2)	**Do not accept**: Examples that are the same action. See below. **This is ONE mark only as reference to <u>somersault</u> in both examples.** 1.a gymnastics coach supporting a somersault 2. a trampoline coach supporting somersault. **Do not accept:** A coach physically moving limbs - TV **Accept:** any appropriate different example(s) which includes physical contact between performer and coach/teacher.

Section B					
Question			**Answer**	**Marks**	**Guidance**
21	**(b)**	**(ii)**	2 marks from: 1. Can give a false/different feeling of the movement to the performer. 2. Over reliance by the performer on the guidance / struggle to perform when guidance removed 3. Can be dangerous if the coach is not experienced/strong enough to prevent accidents / false sense of safety. 4. Incorrect guidance can lead to incorrect technique. 5. Performer/coach may feel uncomfortable due to contact/ proximity	**2** 2 x (AO1)	**Accept:** Pt 3 – "Can be dangerous" can refer to coach or performer
	(c)	**(i)**	4 marks; **Extrinsic** Sub-max 1 from: Knowledge that comes from external/outside sources **Extrinsic(example)** Sub-max 1 from: e.g A coach telling a javelin thrower that their run up was effective. **Intrinsic** Sub-max 1 from: Knowledge about performance that comes from internal/ from within the performer / knowledge from the feel (kinaesthesis) of the action / internal **Intrinsic (example)** Sub-max 1 from: e.g A gymnast performing a handstand and knowing their legs are straight from the feeling in them. / A player telling themselves they need more power from their football pass	**4** 2 x (AO1) 2 x (AO2)	**Marks for each point, they are not linked.** **Extrinsic definition** **Do not accept:** feedback from surrounding **Extrinsic example** **Accept:** any example that demonstrates that the feedback comes from an external source. **Intrinsic example** **Accept:** any example that demonstrates that the feedback comes from within the performer

Section B					
Question			**Answer**	**Marks**	**Guidance**
22	**(a)**		2 marks from: (Examples) 1. Shaking hands with team mates/officials/opposition at the end of a game 2. Clapping the batsmen to the crease in cricket / Applauding good play e.g. clapping when a batsman reaches 100 runs. 3. Apologising/checking the welfare of a netball player you knocked over accidently/ helping a player off the ground. 4. Respecting referees decision	**2** 2 x (AO2)	**Do not accept: Similar examples - ONLY award one mark, for the example below.** 1. shaking hands at the end of a hockey match 2. shaking hands at the end of a netball match **Accep**t:reference to opponent /team/ match without a named activity **Accept:** any appropriate examples.
	(b)		2 marks from: 1. Breaks the flow of the game/ delaying the game/play *(e.g.. Calling a tactical time out in basketball)* 2. Feigning an injury *(e.g. Faking an injury so a substitution can be made during the quarter in netball)* 3. Standing in the line of sight /distract *(e.g. moving around in the goal just before a penalty in football)* 4. Verbal abuse /sledging (e.g. sledging in cricket) 5. Time wasting *(e.g. Kicking the ball out to run so the clock runs down)* *6.* Causing an opponent to overthink *(e.g. making a comment about shot selection in badminton)* 7. Intentionally mislead (*e.g taking the free kick closer to the goal)*	**2** 2 x (AO3)	**Do not accept**: any of the identified points unless they are explained within context. (examples are given in brackets) **Accept**: reference to diving in football – Pt 7

Section B					
Question			**Answer**	**Marks**	**Guidance**
22	**(c)**		2 marks from: **Impact on sport** (Sub-max 1) 1. Gives a bad reputation to the sport (in the media) 2. People/sponsors/media don't want to be involved/ watch sports where cheating exists. 3. People unfairly blame the sport rather than the individuals which tarnishes the image of the sport. **Impact on performer** (Sub-max 1) 4. Can be seen as a cheat/banned from sport/bad reputation 5. If caught can be stripped of achievements/medals/records/sponsorship 6. Side effects/ depression/risk of cancer/organ failure/high blood pressure/infertility/nausea/tiredness/heart issues/increased risk of strokes/ headaches/ sickness/ addiction /increased aggression.	**2** 2 x (AO2)	

Section B					
Question			**Answer**	**Marks**	**Guidance**
22	**(d)**		4 marks from: **Positive influences** 1. Encourages participation (generally) 2. Exposes/advertises sports and physical activities to a wider audience 3. Can create good role models 4. Coverage of large events can encourage/stimulate people to participate e.g. coverage of Wimbledon often leads to more people playing tennis 5. Can educate people in relation to health benefits of participation 6. Can advertise minority sports 7. Can advertise local sport/activities which improves local participation 8. May attract sponsorship which allows clubs to increase facilities/membership **Negative influences** 9. Often focus on major sports which results in people being unaware of minority sports 10. Can be biased towards one gender, which results in less awareness of opportunities for all genders 11. Disability sport(s) are underrepresented resulting in less awareness/availability of opportunities 12. Less coverage of sports/activities for older people may result in them only being aware of the 'traditional' activities of bowls and golf 13. May show graphic image/report of foul play resulting in the sport becoming unattractive/reduces participation 14. Reported behaviour of poor role models may put people off the sport/participating 15. Negative media attention may have negative effect on performance	**4** 4 x (AO3)	**Guidance** **No sub max**

Section B					
Question			**Answer**	**Marks**	**Guidance**
23	**(a)**		4 marks: Sub-max 2 marks from **Minerals** 1. Minerals are essential in many body functions 2. (Calcium) Essential for healthy teeth/bones 3. (Iron) Essential component of haemoglobin/ production of red blood cells Sub-max 2 marks from **Proteins** 4. Important for growth in body tissues/muscles 5. Essential for repair of tissues 6. Necessary for the production of haemoglobin/ enzymes/ hormones 7. They can be a (third) source of energy	**4** 4 x (AO3)	**Accept:** references to other minerals: e.g. potassium aids digestive processes

Level 3 Descriptors (5–6 marks) • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. **Level 2 Descriptors (3–4 marks)** • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. **Level 1 (1–2 marks)** • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn upon from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. **(0 marks)** no response or no response worthy of credit.	**Level 3 Discriminators** • detailed knowledge & examples different types of training • 2 or more physical health benefits identified. • Clear and consistent practical application of knowledge & understanding and evaluation of types of training • AO1, AO2 and AO3 are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed **Level 2 Discriminators** • satisfactory knowledge & 4evaluation of different types of training • A physical health benefit identified. • Some success in practical application of knowledge & understanding types of training • AO1 is covered. some success at more developed AO2 and/or AO3 points moves the response into Level 2 • At the top of this level both AO2 and AO3 both attempted with some success • At the bottom of this level AO2 or AO3 attempted with some success **Level 1 Discriminators** • basic knowledge & examples of types of training • physical health benefit attempted • little or no attempt at practical application of knowledge & understanding of participation in sport and physical activity result in physical health benefits. • little or no attempt to analyse/ evaluate and/or discuss/explain/develop. (AO3) • responses only demonstrating AO1 knowledge and understanding are Level 1

<table>
<tr>
<td>

Q23(b)* Indicative content (6 marks 2xAO1, 2xAO2, 2x AO3)

(Regular training physical health benefits) (AO1)

1. Less chance of injury
2. Better posture
3. Reduced chance of CHD
4. Less chance of obesity/Type 2 diabetes/maintain weight
5. Improved cardiovascular health / lower resting HR
6. Having a stronger heart/cardiac hypertrophy/ may reduce blood pressure levels
7. Increased bone density/ less chance osteoporosis
8. Increased physical fitness/strength/ muscular hypertrophy /flexibility

Continuous Training (examples) (AO2)
e.g. Activity which is carried out without stopping for 20 minutes or more
e.g Low to medium intensity
e.g.Jogging/running
e.g. swimming.
e.g Cycling.
e.g Rowing
e.g using cross trainer / treadmill/ cardio gym equipment

(**Evaluation of continuous training) (AO3)**

- Develops cardiovascular endurance/suits endurance athletes/ marathon runners
- Exercises large muscle groups
- limited equipment needed
- low cost
- Can be boring/repetitive /lonely

</td>
<td>

AO1 = numbered points (KU): Can be credited anywhere in the response.
AO2 = E.g. (EG): Linked to Continuous and Weight Training.
AO3 = bullet points (DEV): Linked to Continuous and Weight Training.

Weight Training (examples)(AO2)
e.g is high intensity/uses reps and sets
e.g Free weight
e.g Machine weights
e.g Bar weights
e.g Multi gym weight
e.g Biceps curls,
e.g tricep dips,
e.g weighted squats etc
e.g named technique

(Evaluation of weight training) (AO3)

- Develops strength/endurance/power suits weight lifter/rower/ boxer
- Can develop lots of muscle groups
- Specialised equipment / gym membership needed
- Higher risk of injury (if technique/weights incorrect)
- Can be expensive to obtain equipment/ pay for gym membership
- Not much space required

</td>
</tr>
</table>

GUIDANCE: DO NOT GIVE CREDIT FOR DESCRIPTION of these types of training.

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on

01223 553998

Alternatively, you can email us on

support@ocr.org.uk

For more information visit

ocr.org.uk/qualifications/resource-finder

ocr.org.uk

Twitter/ocrexams

/ocrexams

/company/ocr

/ocrexams

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT

OCR is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored. © OCR 2023 Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA.

Registered company number 3484466. OCR is an exempt charity.

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up-to-date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please contact us.

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our Expression of Interest form.

Please get in touch if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.