AQA

Please write clearly in block capitals.

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

Surname _____

Forename(s) _____

Candidate signature _____

I declare this is my own work.

GCSE
PHYSICAL EDUCATION

Paper 1 The human body and movement in physical activity and sport

Wednesday 13 May 2020 Afternoon Time allowed: 1 hour 15 minutes

Materials

For this paper you may use:
- a calculator.

Instructions
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 78.
- Questions should be answered in continuous prose. You will be assessed on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

For Examiner's Use	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
TOTAL	

Answer **all** questions.

Do not write outside the box

Only **one** answer per question is allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD 

WRONG METHODS 

If you want to change your answer you must cross out your original answer as shown. 

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown. 

0 1 Which **one** of these bones is found at the elbow joint?

[1 mark]

A Femur ⬭

B Fibula ⬭

C Scapula ⬭

D Ulna ⬭

1

0 2 Which **one** of these statements describes 'adduction' at a ball and socket joint?

[1 mark]

A The movement of a limb away from the midline of the body ⬭

B The movement of a limb in a complete circle at a joint ⬭

C The movement of a limb towards the midline of the body ⬭

D The movement of a limb which increases the angle of a joint ⬭

1

Do not write outside the box

0 3 Which **one** of these is the role of a ligament?

[1 mark]

A To attach bone to bone ⬭

B To attach muscle to bone ⬭

C To act as a shock absorber between bones ⬭

D To release synovial fluid ⬭

1

0 4 Which **one** of these lung volumes is 'the maximum amount of air that can be taken into the lungs above that taken in during a normal breath'?

[1 mark]

A Expiratory reserve volume ⬭

B Inspiratory reserve volume ⬭

C Residual volume ⬭

D Tidal volume ⬭

1

0 5 For which **one** of these events would a performer be **most** likely to use high altitude training?

[1 mark]

A 200m ⬭

B Pole vault ⬭

C 5000m ⬭

D Shot put ⬭

1

Turn over ►

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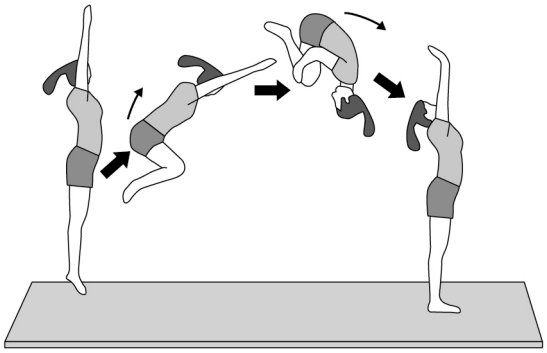
0 6 Helen is a gymnast.

Figure 1 shows Helen performing a front somersault.

Figure 1



0 6 . 1 Identify the plane and axis of movement used when Helen performs a front somersault.

[2 marks]

Plane _____

Axis _____

0 6 . 2 Define flexibility. Evaluate the importance of flexibility for Helen as she performs in gymnastics.

[4 marks]

Definition _____

_____

Evaluation _____

_____

_____

_____

_____

_____

_____

_____

_____

Do not write outside the box

0 6 . 3 Helen uses different types of strength when she performs in gymnastics.

Define static strength. Explain how Helen can use static strength in her gymnastic performance.

[3 marks]

Definition _____

_____

Explanation _____

_____

_____

_____

_____

_____

0 6 . 4 How would Helen use weight training to develop her static strength?

[2 marks]

_____

_____

_____

_____

_____

_____

11

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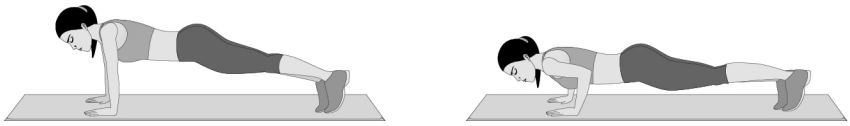
0 7 **Figure 2** shows an individual performing a push-up.

Figure 2



A **B**

0 7 . 1 Using **Figure 2**, identify what type of muscle contraction is taking place in the arms during the downward phase (**A** to **B**) of the push-up.

[1 mark]

0 7 . 2 Using **Figure 2**, identify the main agonist in the arm during the downward phase (**A** to **B**) of the push-up.

[1 mark]

0 7 . 3 Using **Figure 2**, identify the lever system working at the elbow during the upward phase (**B** to **A**) of the push-up.

[1 mark]

0 7 . 4 Draw a fully labelled diagram in the box below to show the type of lever identified in your answer to Question **07.3**.

[2 marks]

5

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0 8 Ibrahim participates in a range of athletics events which use different energy systems and muscle groups.

0 8 . 1 Define anaerobic exercise. Use an example from athletics in your answer.

[2 marks]

Definition _____

_____

Example _____

_____

0 8 . 2 Define aerobic exercise. Use an example from athletics in your answer.

[2 marks]

Definition _____

_____

Example _____

_____

0 8 . 3 Identify the **two** waste products released from the body when Ibrahim is working aerobically.

[2 marks]

1 _____

2 _____

Question 8 continues on the next page

Do not write outside the box

0 8 . 4 Explain how Ibrahim's skeletal and muscular system work together to bring about movement.

[3 marks]

9

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0 9 Matthew is a Year 7 student who is a very good all-round sportsman. He has recently undertaken a series of fitness tests to measure his fitness levels.

The multi stage fitness test was used to measure Matthew's cardiovascular endurance.

0 9 . 1 Describe the multi stage fitness test.

[4 marks]

Question 9 continues on the next page

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0 9 . 2 Discuss whether fitness testing is an appropriate way of assessing Matthew's sporting ability.

[5 marks]

9

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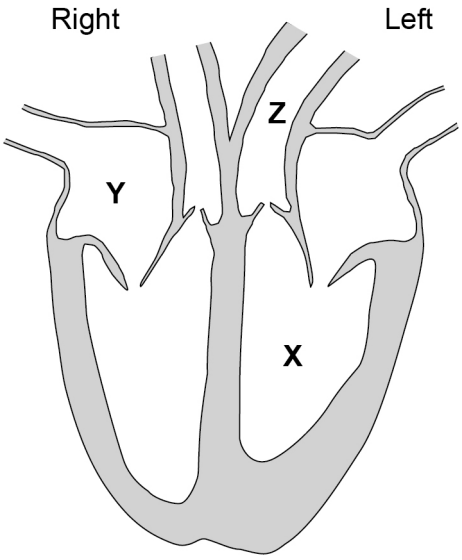
1 0 **Figure 3** shows the structure of the heart.

Figure 3



1 0 . 1 Identify the chambers of the heart labelled **X** and **Y** in **Figure 3**.

[2 marks]

X _____

Y _____

1 0 . 2 What is the role of **Z** in **Figure 3**?

[1 mark]

_____

_____

1 0 . 3 Complete the formula for cardiac output.

[1 mark]

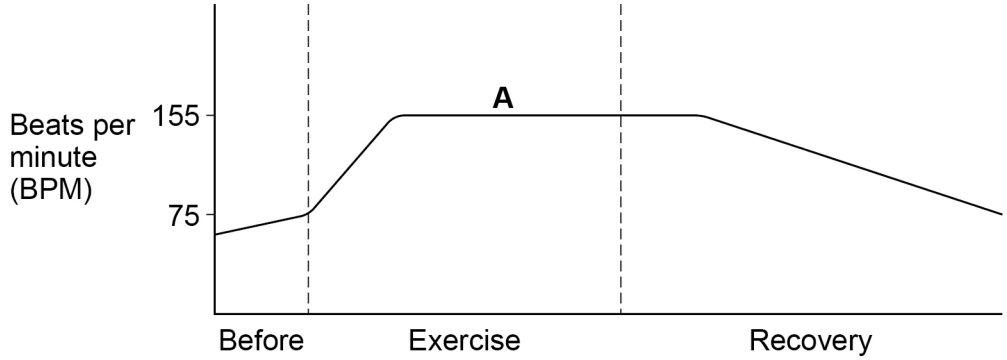
Cardiac output (Q) = _____

_____

Question 10 continues on the next page

Figure 4 shows the heart rate of an individual before, during and in recovery from exercise.

Figure 4



1 0 . 4 Explain what is happening to the heart rate before exercise in **Figure 4**.

[3 marks]

1 0 . 5 What is the intensity of exercise at point **A** in **Figure 4**?

[1 mark]

1 0 . 6 Explain how vasodilation helps to direct blood flow when we exercise.

[2 marks]

Do not write outside the box

10

Turn over for the next question

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1 1 . 1 Complete **Figure 5** to show the pathway of air.

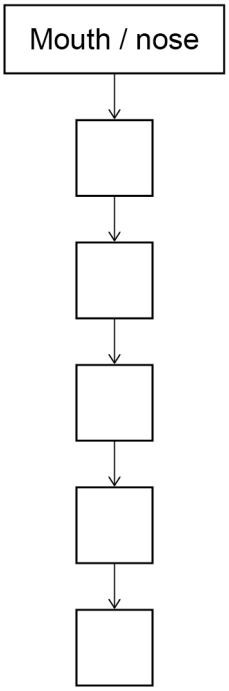
Write the numbers from the following list in the boxes shown in **Figure 5** to show the correct order of the pathway of air.

The first position in **Figure 5** has been completed for you. Use each number only once.

[5 marks]

1. Alveoli
2. Bronchi
3. Trachea
4. Lungs
5. Bronchioles

Figure 5



1 1 . 2 During exercise the lungs expand more to allow a greater volume of air to be breathed in.

Name the **two** muscles that help the diaphragm and intercostal muscles in this process.

[2 marks]

1 _____

2 _____

7

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1 2 . 1 Define speed.

[1 mark]

1 2 . 2 Explain how a 1500m runner could use speed to their advantage in a 1500m race.

[3 marks]

1 2 . 3 Give an example of a sporting action for each of the following components of fitness.

[3 marks]

Agility

Flexibility

Reaction time

Agility

Flexibility

Reaction time

Question 12 continues on the next page

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1 2 . 4 Evaluate the importance of plyometric training **and** interval training to a games player.

[6 marks]

13

1 3 Nell is a 16-year-old who represents her county at both football and netball. She is undertaking an intensive training programme so that she can perform to her maximum potential.

Analyse the different methods that Nell could use to prevent injury and recover from vigorous exercise to optimise her performance.

[9 marks]

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Extra space

9

END OF QUESTIONS

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