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I declare this is my own work.

# GCSE PHYSICAL EDUCATION

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

Wednesday 22 May 2024

Afternoon

Time allowed: 1 hour 15 minutes

## Materials

For this paper you must have:

- a ruler.

## 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 the 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 to 5       |      |
| 6            |      |
| 7            |      |
| 8            |      |
| 9            |      |
| 10           |      |
| 11           |      |
| 12           |      |
| 13           |      |
| 14           |      |
| 15           |      |
| 16           |      |
| 17           |      |
| 18           |      |
| 19           |      |
| 20           |      |
| <b>TOTAL</b> |      |



J U N 2 4 8 5 8 2 1 0 1

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Answer **all** questions.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**

What happens to the diaphragm during inhalation?

**[1 mark]****A** It contracts
☐
**B** It extends
☐
**C** It expands
☐
**D** It remains the same
☐
**0 2**Which **one** of the following is the correct unit of measurement for the Illinois Agility Test?**[1 mark]****A** Centimetres
☐
**B** Levels
☐
**C** Metres
☐
**D** Seconds
☐


0 3

Which **one** of these will air pass through immediately before entering the alveoli?

[1 mark]

A Bronchi

☐

B Bronchioles

☐

C Mouth

☐

D Trachea

☐

0 4

Which **one** of these is the maximum heart rate for a 14-year-old girl?

[1 mark]

A 204

☐

B 206

☐

C 208

☐

D 210

☐

0 5

Which **one** of the following would a netballer be **most** likely to take part in during the post-season?

[1 mark]

A High intensity interval training

☐

B Light jogging

☐

C Netball fixtures

☐

D Passing drills

☐

5

Turn over ►



0 6

Define health **and** fitness.

[2 marks]

Health \_\_\_\_\_

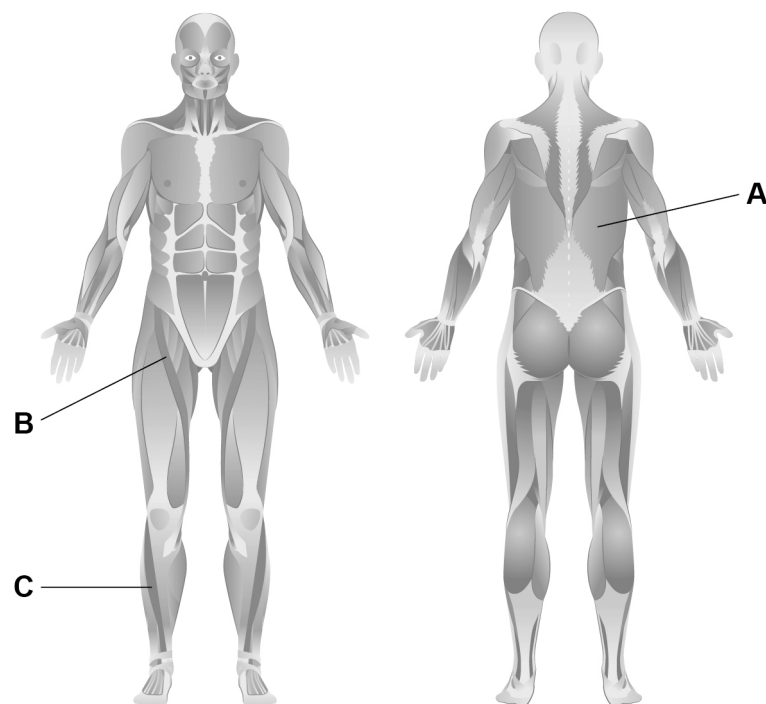
\_\_\_\_\_

Fitness \_\_\_\_\_

\_\_\_\_\_

2

0 7

**Figure 1** shows muscles in the body.**Figure 1**

0 7

1

Identify the muscles labelled **A**, **B** and **C** in **Figure 1**.

[3 marks]

**A** \_\_\_\_\_**B** \_\_\_\_\_**C** \_\_\_\_\_

**0 7 . 2** Name **two** bones located at the head/neck.

**[2 marks]**

1 \_\_\_\_\_

2 \_\_\_\_\_

**0 7 . 3** Explain how muscles **and** bones work to produce movement.

**[3 marks]**

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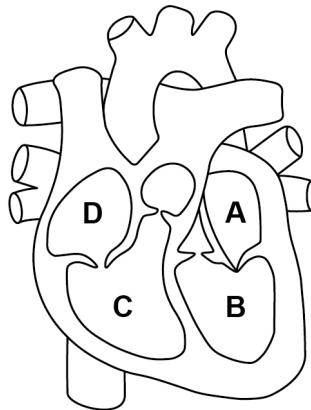
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**0 8** **Figure 2** shows a diagram of the heart.

**Figure 2**



Name the **four** chambers labelled **A**, **B**, **C** and **D** in **Figure 2**.

**[4 marks]**

**A** \_\_\_\_\_

**B** \_\_\_\_\_

**C** \_\_\_\_\_

**D** \_\_\_\_\_

Turn over ►



0 9

Explain how the function of arteries **and** veins in the cardiovascular system allows an athlete to complete a marathon.

[4 marks]

Arteries \_\_\_\_\_

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Veins \_\_\_\_\_

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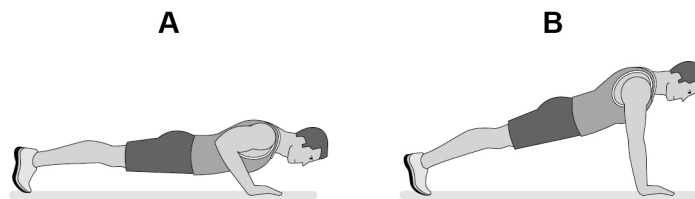
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4

1 0

**Figure 3** shows an individual performing a push-up.

Figure 3



Use **Figure 3** to help you answer **Questions 10.1 to 10.3**.

1 0 . 1

Identify the joint action taking place at the **elbow** during the **upward** phase (**A to B**) of the push-up.

[1 mark]

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1 0 . 2

Identify the main agonist at the **elbow** during the **upward** phase (**A to B**) of the push-up.

[1 mark]

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1 0 . 3

Identify the type of isotonic muscle contraction taking place at the **elbow** during the **upward** phase (**A** to **B**) of the push-up.

[1 mark]

---



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3

1 1

Rizwan is aiming to perform 40 push-ups.

Identify the type of muscular strength that Rizwan uses to perform 40 push-ups.

Justify your answer.

[3 marks]

Type of strength \_\_\_\_\_

Justification \_\_\_\_\_

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3

1 2 . 1

Identify **three** components of fitness which can be improved using weight training.

[3 marks]

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

**Question 12 continues on the next page**

**Turn over ►**



1 2 . 2

State **three** ways to minimise the risk of injury when weight training.**[3 marks]**

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

3 \_\_\_\_\_

\_\_\_\_\_

1 2 . 3

Discuss whether weight training is an effective type of training for games players.

**[5 marks]**

\_\_\_\_\_

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1 3 . 1

Define plantar flexion.

Give a sporting example.

**[2 marks]**

Definition \_\_\_\_\_

\_\_\_\_\_

Example \_\_\_\_\_

\_\_\_\_\_

1 3 . 2

Define adduction.

Give a sporting example.

**[2 marks]**

Definition \_\_\_\_\_

\_\_\_\_\_

Example \_\_\_\_\_

\_\_\_\_\_

4

**Turn over for the next question****Turn over ►**

5



**1 5**

Milo is competing in a 1000m rowing race.

**Table 1** shows his cardiac output in litres per minute (l/min) at rest and during the 1000m race.

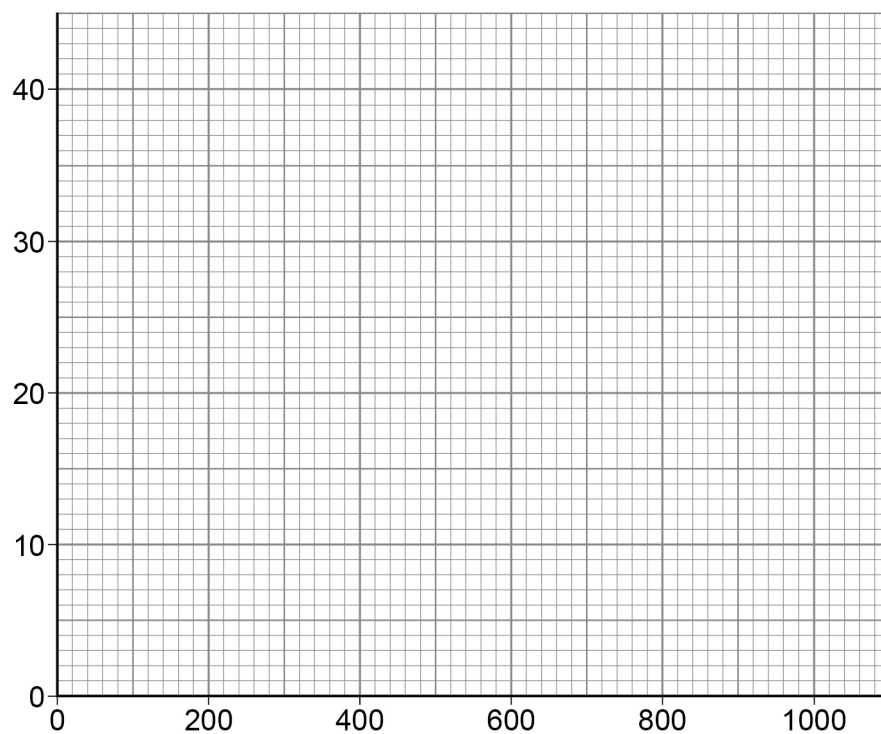
**Table 1**

| Distance (m) | Cardiac output (l/min) |
|--------------|------------------------|
| 0            | 5                      |
| 200          | 9                      |
| 400          | 16                     |
| 600          | 25                     |
| 800          | 27                     |
| 1000         | 32                     |

Using the graph paper below:

- Draw a line graph to show Milo's cardiac output in litres per minute (l/min) at the start and during the 1000m rowing race.
- Label the axes.

**[2 marks]**



**Turn over ►**



**1 6 . 1** Identify **three** short term effects of exercise.

**[3 marks]**

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

3 \_\_\_\_\_

\_\_\_\_\_

**1 6 . 2** A cool down and stretching are two ways to recover from vigorous exercise.

Explain **two other** ways to improve recovery from vigorous exercise.

**[4 marks]**

1 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



1 7

Javeria is an ice skater.

**Figure 4** shows Javeria performing a  $360^\circ$  twist (ice skating spin).

**Figure 4**



Identify the plane **and** axis of movement when Javeria performs the  $360^\circ$  twist.

**[2 marks]**

Plane \_\_\_\_\_

Axis \_\_\_\_\_

2

**Turn over for the next question**

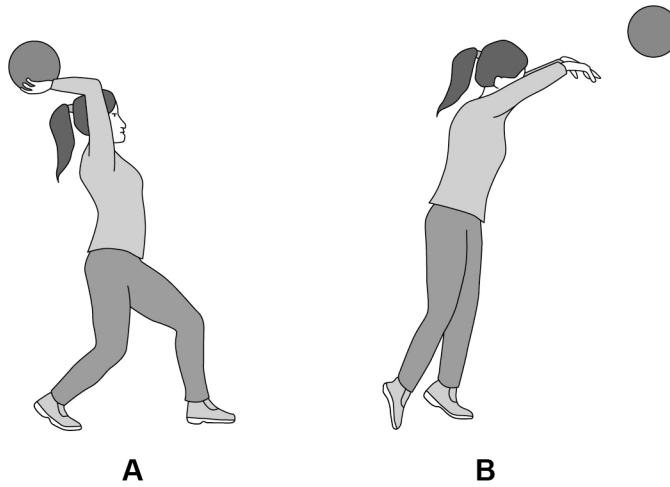
**Turn over ►**



1 8

**Figure 5** shows a netball player in two different positions (**A** and **B**) as they perform a throw.

**Figure 5**



Use **Figure 5** to help answer the following questions.

1 8

1

Identify the class of lever system used at the **elbow** as it moves from **A** to **B**.

[1 mark]

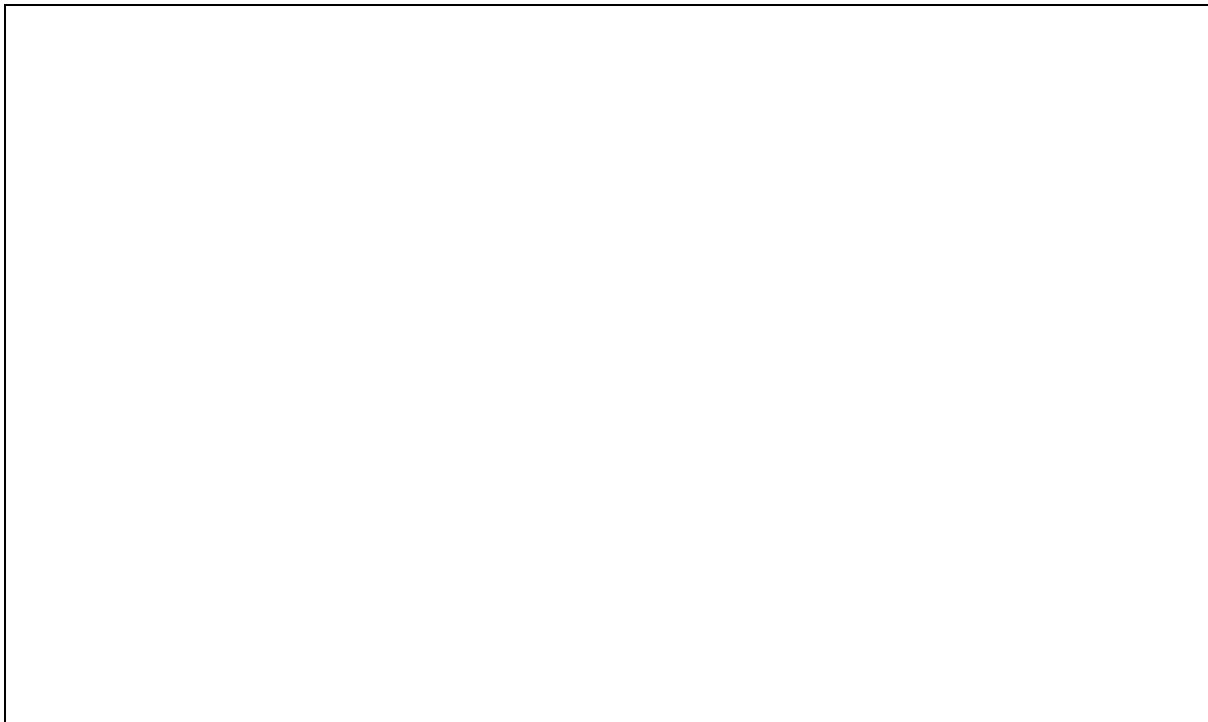
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1 8

2

Draw a fully labelled diagram to show the class of lever identified in **Question 18.1**.

[2 marks]



Analyse how different types of bones help an individual taking part in a sporting activity of your choice.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

6



**[9 marks]**

[illegible]

Extra space \_\_\_\_\_

**END OF QUESTIONS**



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ANSWER IN THE SPACES PROVIDED**



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