



Please write clearly in block capitals.

Centre number

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Candidate number

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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 17 May 2023

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 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 6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
TOTAL	



J U N 2 3 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

Which **one** of these structures attaches muscles to bones?

[1 mark]

A Cartilage

B Ligaments

C Membranes

D Tendons

0 2

Which **one** of these describes stroke volume?

[1 mark]

A The volume of blood in the veins

B The volume of blood pumped by the heart in one minute

C The volume of blood pumped by the heart in one contraction

D The volume of blood within the heart



0 3

Which **one** of these muscles is found in the leg?

[1 mark]

A Deltoid

B Gastrocnemius

C Latissimus dorsi

D Rotator cuffs

0 4

Lisa is doing light aerobic training to maintain a level of general fitness.

In which **one** of these training seasons is she working in?

[1 mark]

A Competition

B Post-season

C Pre-season

0 5

Which **one** of these describes an isometric contraction?

[1 mark]

A The muscle expands in size

B The muscle increases in length

C The muscle remains the same length

D The muscle decreases in length

Turn over ►

0 6

Which **one** of these movements takes place in a frontal plane?

[1 mark]

A Bicep curl

B Discus throw

C Front somersault

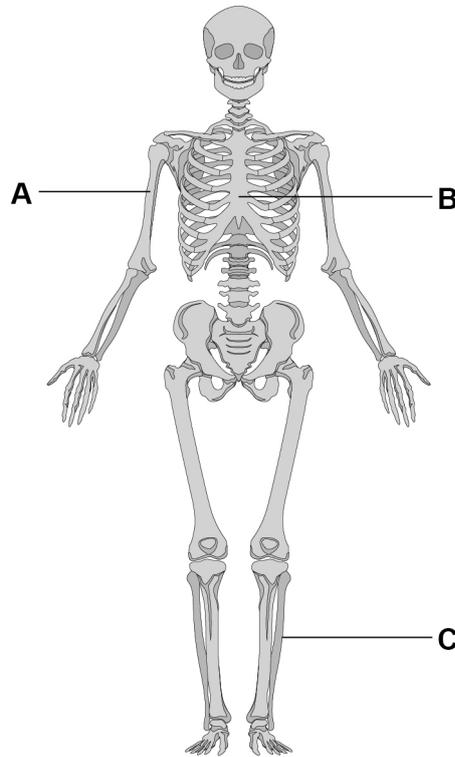
D Star jump

6

0 7

Figure 1 shows a human skeleton.

Figure 1



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

[3 marks]

A _____

B _____

C _____

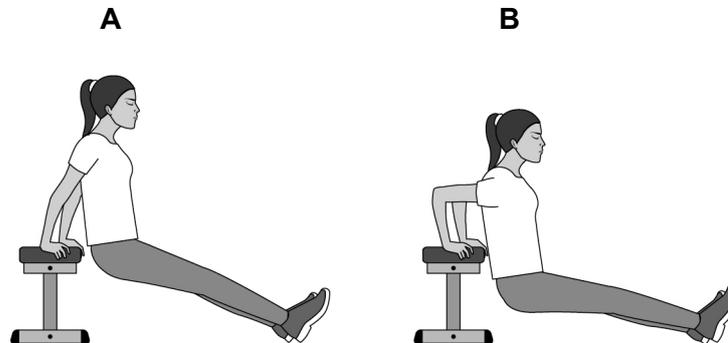
3



0 8

Figure 2 shows an athlete in two different positions (**A** and **B**) as the athlete performs a tricep dip.

Figure 2



Use **Figure 2** to help answer the following questions.

0 8

. 1

Identify the joint action taking place at the **elbow** as the arm moves from **A** to **B**.

[1 mark]

0 8

. 2

Identify the main antagonist at the **elbow** as the arm moves from **A** to **B**.

[1 mark]

0 8

. 3

Identify the type of isotonic muscle contraction that is taking place at the **elbow** as the arm moves from **A** to **B**.

[1 mark]

—
3

Turn over for the next question

Turn over ►



0 9

Dynamic strength is required to perform in a 1000m rowing race.

Define 'dynamic strength'.

Justify why dynamic strength is important in a 1000m rowing race.

[4 marks]

Definition _____

Justification _____

4

1 0

Chris is an experienced 25-year-old 800m runner.

Table 1 shows Chris's heart rate in beats per minute (bpm) at **the start** and **during** an 800m race.

Table 1

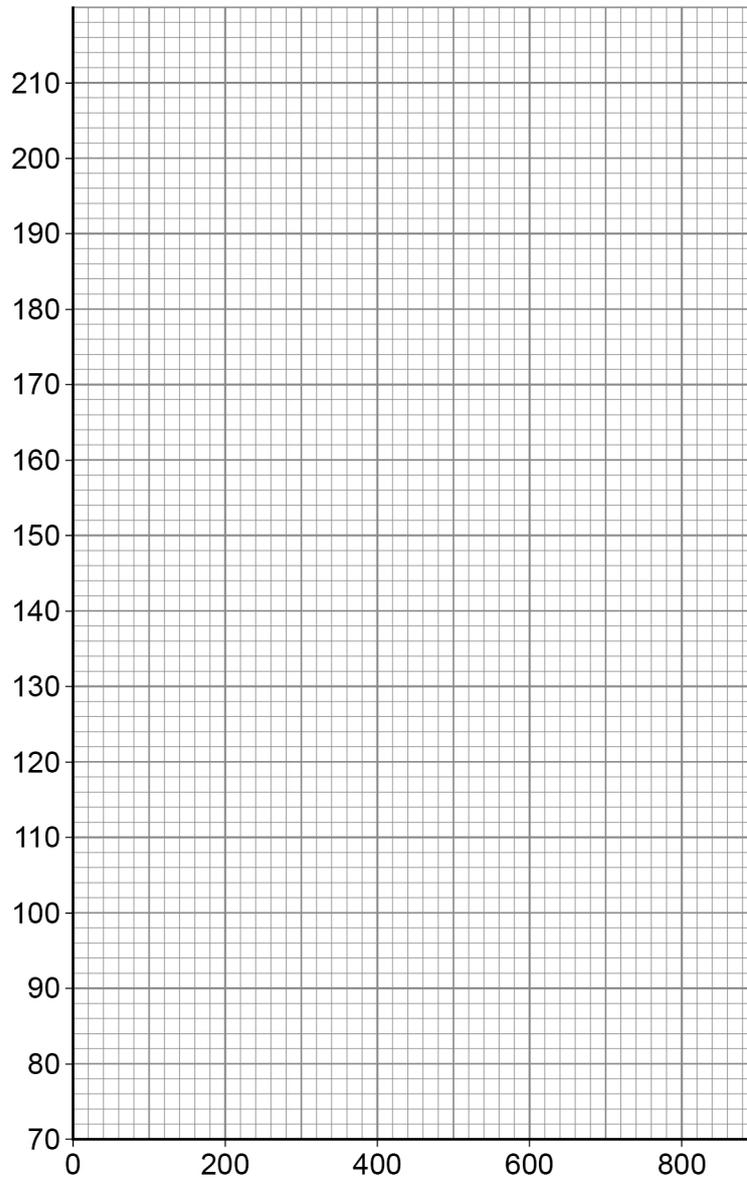
Distance (m)	Heart rate (bpm)
0	80
200	130
400	140
600	160
800	200



1 0 . 1

Draw a line graph on the graph paper below to show Chris's heart rate at **the start** and **during** an 800m race.

Label the axes.



[2 marks]

Question 10 continues on the next page

Turn over ►



1 0 . 2 Chris has a resting heart rate of 50 beats per minute (bpm).

Explain why Chris's heart rate is higher at the start of the race than his resting heart rate.

[2 marks]

1 0 . 3 Explain **three** factors that can affect Chris's speed of recovery.

[3 marks]

Factor 1 _____

Factor 2 _____

Factor 3 _____

1 0 . 4 Chris's breathing rate will change during the race.

Define tidal volume.

Explain the changes that occur to Chris's tidal volume during the 800m race.

[3 marks]

Definition _____

Explanation _____

10



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1 3 . 1

Define abduction.

Use an example of a sporting action in your answer.

[2 marks]

Definition _____

Example _____

1 3 . 2

Name the type of joint where abduction can take place.

[1 mark]

—
3

1 4

Delayed onset of muscle soreness (DOMS) can occur after vigorous exercise.

Evaluate the use of ice baths to prevent DOMS.

[4 marks]

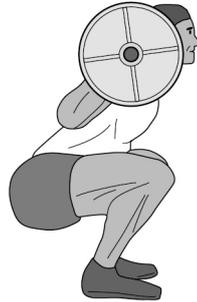
—
4



1 5

Figure 3 shows a person performing a back squat.

Figure 3



1 5 . 1

Identify the class of lever system used at the **knee** whilst performing the back squat in **Figure 3**.

[1 mark]

Question 15 continues on the next page

Turn over ►

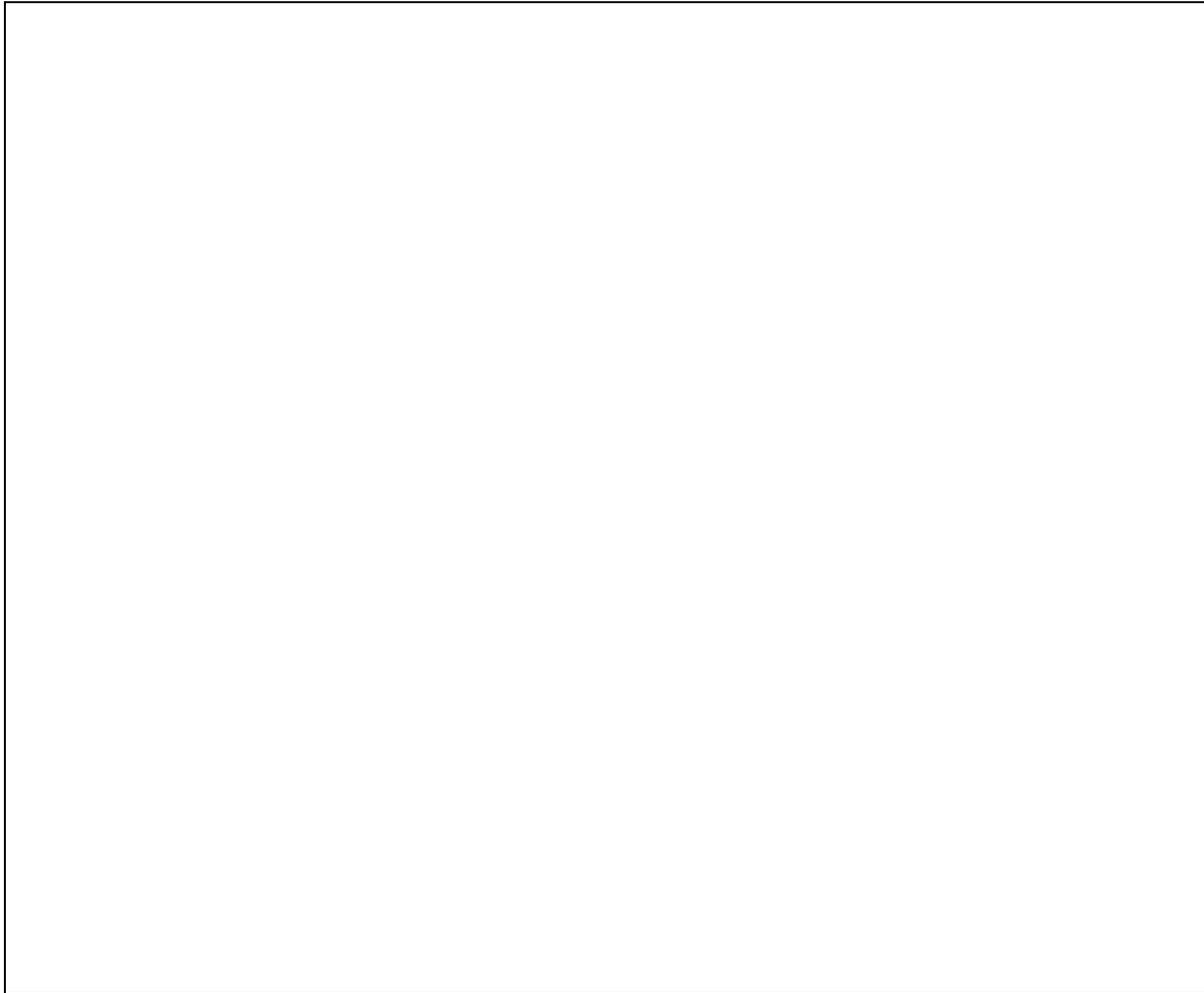


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1 5 . 2

Draw a fully labelled diagram to show the class of lever identified in **Question 15.1**.

[2 marks]



1 5 . 3

Explain why the lever in **Figure 3** has a low mechanical advantage.

[2 marks]

5



1 7

Poppy is a 100 metre sprinter.

1 7 . 1

Speed is important to Poppy.

Name and describe a test that measures speed.

[4 marks]

Test _____

Description _____

1 7 . 2

Define reaction time.

Outline one reason why reaction time is important to Poppy.

[2 marks]

Definition _____

Reason _____

6



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1 8

Describe the process of high altitude training.

Use a sporting example in your answer.

[3 marks]

3

Turn over for the next question

Turn over ►



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Extra space

9

END OF QUESTIONS



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