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Centre number

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Candidate number

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Surname

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Forename(s)

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Candidate signature

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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

Time allowed: 1 hour 15 minutes

## Materials

For this paper you must have:

- 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 to 7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
<b>TOTAL</b>	



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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 components of fitness is the **most** important when dribbling a ball around a defender in basketball?**[1 mark]****A** Agility**B** Muscular endurance**C** Reaction time**D** Strength**0 2**Which **one** of these is the correct pathway of the blood in the cardiac cycle as it returns to the heart from the vena cava?**[1 mark]****A** Left atrium – right atrium – right ventricle – left ventricle**B** Left ventricle – left atrium – right ventricle – right atrium**C** Right atrium – right ventricle – left atrium – left ventricle**D** Right ventricle – right atrium – left ventricle – left atrium

0 3

Which **one** of these bones is located at the shoulder joint?

[1 mark]

A Radius

B Scapula

C Talus

D Ulna

0 4

A sprinter includes speed work in their training.

Which **one** of these principles of training are they using?

[1 mark]

A Progressive overload

B Reversibility

C Specificity

**Turn over for the next question**

**Turn over ►**



**0 5****Table 1** shows the ratings of a GCSE PE class for the Vertical Jump Test.

**Table 1**

Rating	Class jump height range in cm	
	Male	Female
Excellent	Jump $\geq 65$	Jump $\geq 58$
Above average	$50 \leq \text{Jump} < 65$	$46 \leq \text{Jump} < 58$
Average	$40 \leq \text{Jump} < 50$	$35 \leq \text{Jump} < 46$
Below average	$30 \leq \text{Jump} < 40$	$26 \leq \text{Jump} < 35$
Poor	Jump $< 30$	Jump $< 26$

Mark is a male student who jumps 59 cm

What rating is this according to **Table 1**?

**[1 mark]**

- A** Excellent
- B** Above average
- C** Average
- D** Below average
- E** Poor



0 6

Which **one** of these describes muscular hypertrophy?

[1 mark]

- A Muscles contract
- B Muscles decrease in size
- C Muscles increase in size
- D Muscles retain their shape

0 7

Which **one** of these describes what happens to the digestive system's blood supply during exercise?

[1 mark]

- A Blood supply increases
- B Blood supply reduces
- C Blood supply remains the same

---

7

**Turn over for the next question**

**Turn over ►**



0 8

Andrew is 40-years-old.

0 8 . 1

Calculate Andrew's maximum heart rate.

[1 mark]

\_\_\_\_\_ beats per minute

0 8 . 2

State the percentage range of maximal heart rate for the **aerobic** training zone.

Calculate Andrew's heart rate range in beats per minute (BPM) for his **aerobic** training zone.

[2 marks]

The aerobic training zone is between \_\_\_\_\_% and  
\_\_\_\_\_ % of maximal heart rate.

Andrew's heart rate range for his aerobic training zone is between  
\_\_\_\_\_ BPM and \_\_\_\_\_ BPM

3

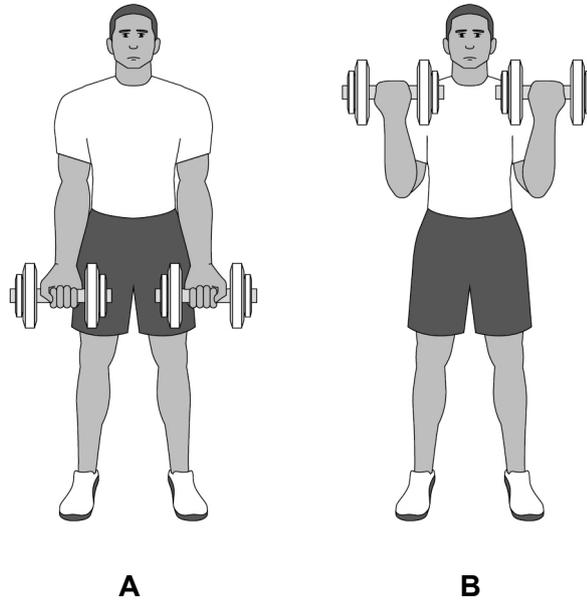


0 9

**Figure 1** shows an athlete in two different positions (**A** and **B**) as he performs a bicep curl.

Use **Figure 1** to help you answer **Questions 09.1** to **09.3**.

**Figure 1**



0 9 . 1

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

[1 mark]

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0 9 . 2

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

[1 mark]

---

0 9 . 3

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

[1 mark]

---

3

Turn over ►



1 0

Figure 2 shows Anna performing a running action.

Figure 2



1 0 . 1

Identify the plane and axis when Anna is performing a running action as shown in Figure 2.

[2 marks]

Plane \_\_\_\_\_

Axis \_\_\_\_\_

1 0 . 2

Anna uses explosive strength when running a 400m race.

Define 'explosive strength'.

Justify why explosive strength is important when running a 400m race.

[4 marks]

Definition \_\_\_\_\_

\_\_\_\_\_

Justification \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6



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1 1 . 1

Define 'flexibility'.

[1 mark]

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1 1 . 2

The Sit and Reach Test measures flexibility.

Describe how to carry out this test.

[3 marks]

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1 1 . 3

Justify why flexibility is an important component of fitness needed for a games player to perform effectively.

[3 marks]

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7

Turn over ►



1 2 . 1

State **four** factors other than warming up and stretching that should be considered to help prevent injury **before** and **during** a training session.

[4 marks]

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

3 \_\_\_\_\_

\_\_\_\_\_

4 \_\_\_\_\_

\_\_\_\_\_

1 2 . 2

Explain why it is important to cool down after an intensive training session.

[4 marks]

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

8



**1 3 . 1** What is the role of a tendon?

**[1 mark]**

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**1 3 . 2** Muscles work in pairs.

Outline the role of the antagonist.

**[2 marks]**

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**1 3 . 3** Name **two** major muscle groups that allow the leg to move at the hip.

**[2 marks]**

1 \_\_\_\_\_

2 \_\_\_\_\_

**5**

**Turn over for the next question**

**Turn over ►**



1 4 . 1

Define 'adduction'.

Use a sporting example in your answer.

[2 marks]

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1 4 . 2

Name the **type** of joint where adduction can take place.

[1 mark]

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1 4 . 3

Define 'isometric contraction'.

Use a sporting example in your answer.

[2 marks]

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5



1 5 . 1

What is formed when haemoglobin and oxygen combine in the red blood cells?

[1 mark]

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1 5 . 2

Identify **four** features of the alveoli that assist in gaseous exchange.

[4 marks]

1 

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2 

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3 

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4 

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1 5 . 3

Explain how air pressure changes occur in the chest cavity allowing exhalation to take place.

Refer to the roles of the intercostal muscles, rib cage and diaphragm.

[4 marks]

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9

Turn over for the next question

Turn over ►



**1 6 . 1** Name **two** bones located at the ankle.

**[2 marks]**

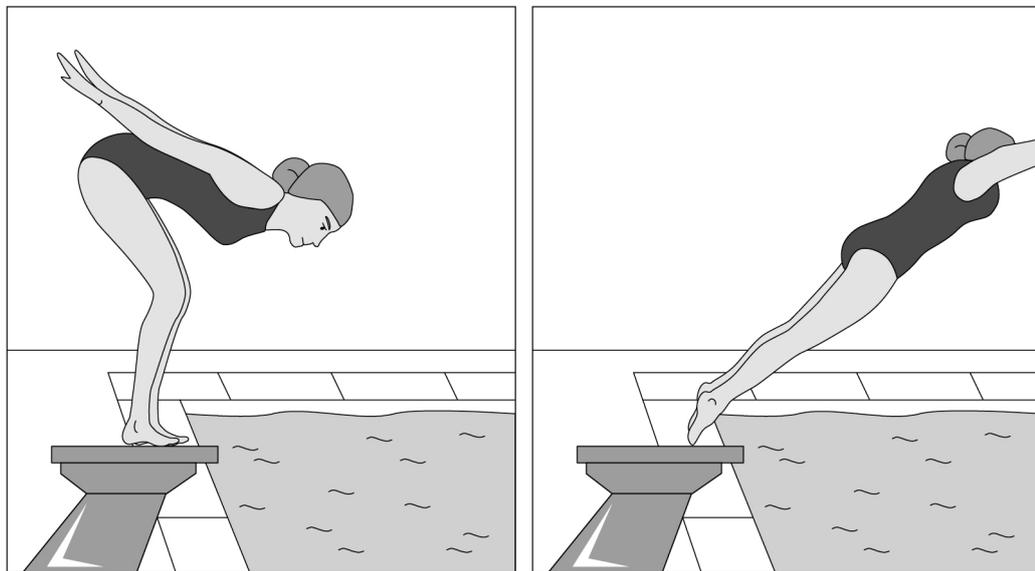
1 \_\_\_\_\_

2 \_\_\_\_\_

**Figure 3** shows a swimmer in two different positions (**A** and **B**) as they perform a dive.

Use **Figure 3** to help you answer **Question 16.2**.

**Figure 3**



**A**

**B**

**1 6 . 2** Identify the class of lever used at the ankle as shown in **Figure 3**.

**[1 mark]**

\_\_\_\_\_

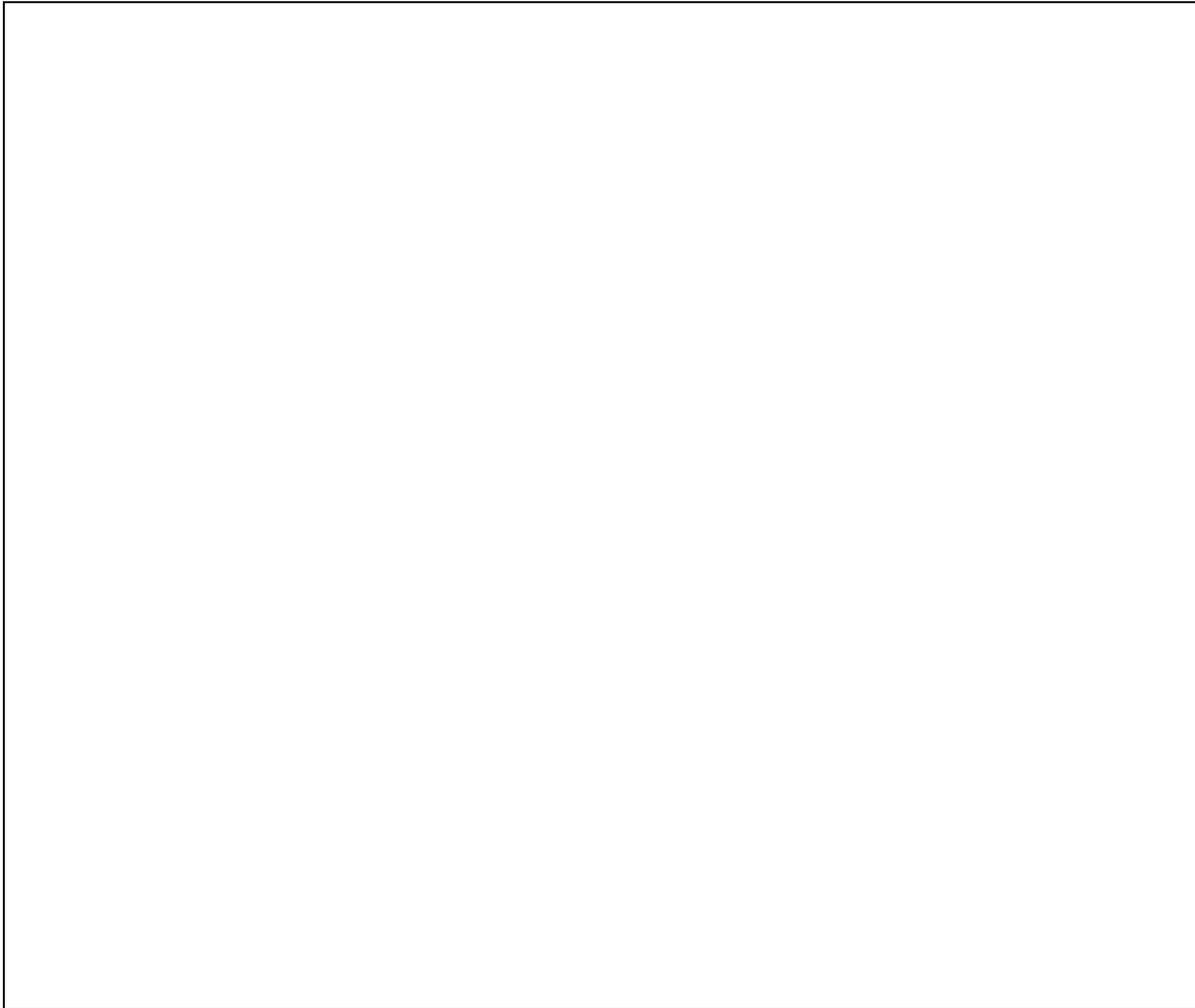


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1 6 . 3

Draw a fully labelled diagram to show the class of lever identified in **Question 16.2.**

**[2 marks]**



5

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**Turn over ►**











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