

A

**AQA** 

**Surname** \_\_\_\_\_

**Other Names** \_\_\_\_\_

**Centre Number** \_\_\_\_\_

**Candidate Number** \_\_\_\_\_

**Candidate Signature** \_\_\_\_\_

**GCSE**

**PHYSICAL EDUCATION**

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

**8582/1**

**Wednesday 16 May 2018 Morning**

**Time allowed: 1 hour 15 minutes**

**For this paper you may use:**

- a calculator.

**At the top of the page, write your surname and other names, your centre number, your candidate number and add your signature.**

**[Turn over]**



# INSTRUCTIONS

- **Use black ink or black ball-point pen. Pencil should only be used for drawing.**
- **Answer ALL questions.**
- **You must answer questions in the space provided. Do not write on blank pages.**
- **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 the 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.**

**DO NOT TURN OVER UNTIL TOLD TO DO SO**



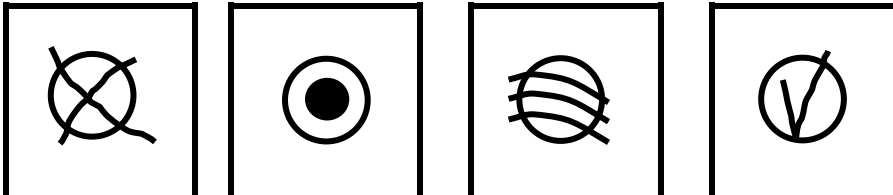
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**Answer ALL questions.**

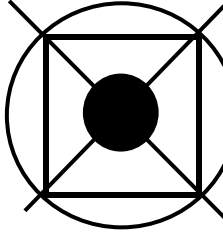
**Only ONE answer per question is allowed.**

**For each answer 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.** 

5

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Which **ONE** of these is the most appropriate test to measure maximal strength? [1 mark]

**A The 30 Metre Sprint Test**

**B The Handgrip Dynamometer Test**

**C The One Rep Max Test**

**D The Vertical Jump Test**

**[Turn over]**



6

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Which **ONE** of these lung volumes is defined as 'the volume of air left in the lungs after maximal expiration'?  
[1 mark]

**A Expiratory reserve volume**

**B Inspiratory reserve volume**

**C Residual volume**

**D Tidal volume**

2



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Which **ONE** of these muscles is found at the shoulder joint? [1 mark]

**A Deltoid**

**B Gastrocnemius**

**C Gluteals**

**D Tibialis anterior**

**[Turn over]**



8

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Which **ONE** of these bones is located at the ankle joint? [1 mark]

**A Femur**

**B Humerus**

**C Scapula**

**D Talus**





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**Which ONE of these best describes coordination? [1 mark]**

**A To change body position quickly**

**B To exercise the body for long periods of time**

**C To move two or more body parts together smoothly**

**D To perform strength movements quickly**

**[Turn over]**

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<b>3</b>



10

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Which **ONE** of these is a long term benefit of exercise? [1 mark]

**A Higher resting heart rate**

**B Reduced blood pressure**

**C Reduced stroke volume**

**D Reduced tidal volume**



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Which **ONE** of these are suitable methods of collecting qualitative data? [1 mark]

**A Interviews and observations**

**B Interviews and surveys**

**C Observations and surveys**

**D Questionnaires and surveys**

**[Turn over]**

<hr/>
<b>2</b>



08

**FIGURE 1** shows a photograph of Usain Bolt driving away from the starting blocks in a 200m race.

**FIGURE 1**



**Driving leg**

**08.1** Using FIGURE 1, identify the joint movements at the hip and ankle of Usain Bolt's driving leg. [2 marks]

**Hip** \_\_\_\_\_

\_\_\_\_\_

**Ankle** \_\_\_\_\_

\_\_\_\_\_

**08.2** Using FIGURE 1, identify the main agonist at the knee and ankle of Usain Bolt's driving leg. [2 marks]

**Knee** \_\_\_\_\_

\_\_\_\_\_

**Ankle** \_\_\_\_\_

\_\_\_\_\_

**[Turn over]**



**0 9**

**When a performer exercises, blood is redistributed to different parts of the body.**

**Explain TWO ways in which the body redistributes blood during exercise. [4 marks]**

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**2**

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**8**



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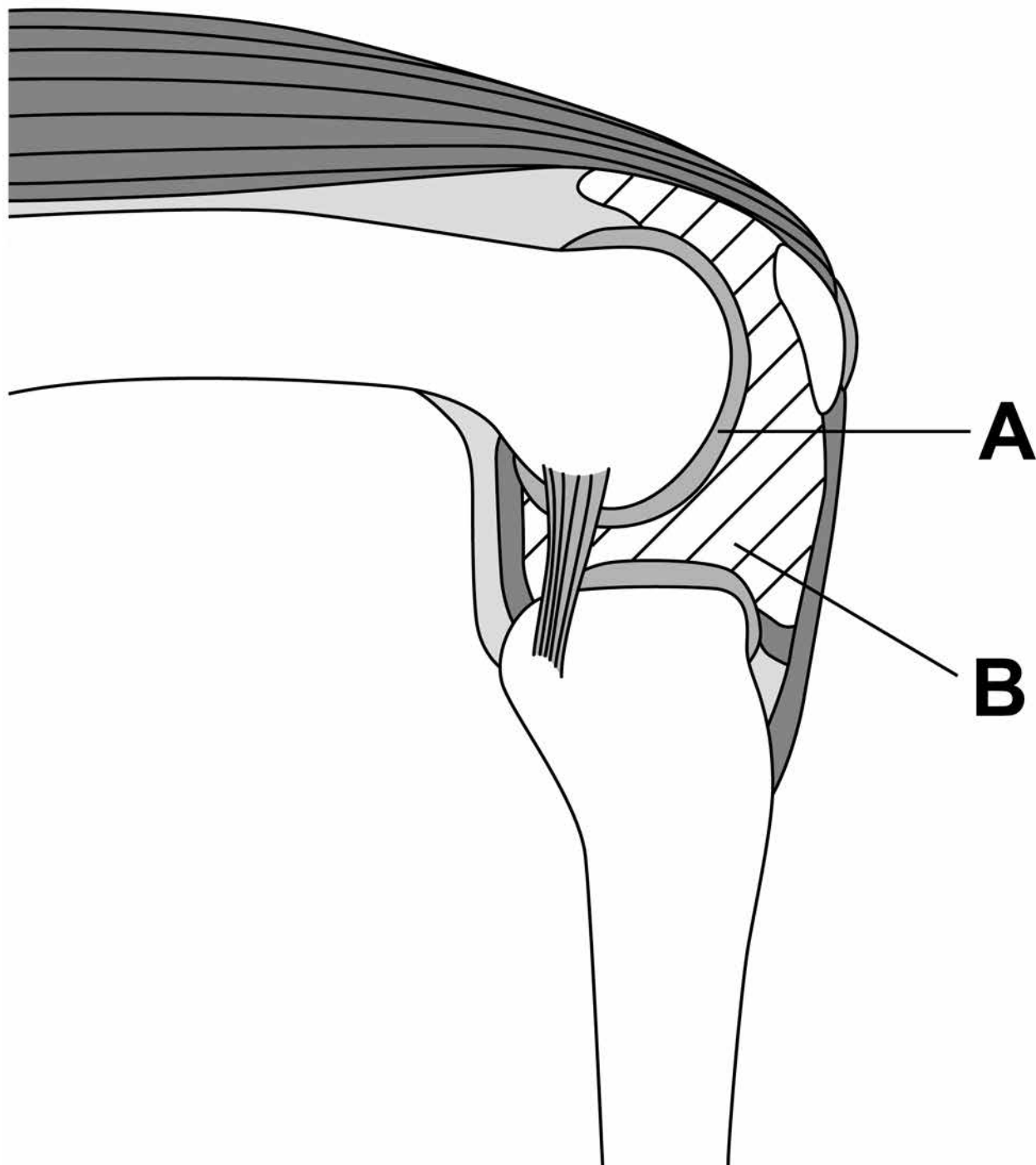
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**FIGURE 2** shows a diagram of the knee joint.

**FIGURE 2**





**10.1** Identify structures A and B from FIGURE 2. [2 marks]

Structure A \_\_\_\_\_

\_\_\_\_\_

Structure B \_\_\_\_\_

\_\_\_\_\_

**10.2** For ONE of the structures identified in question 10.1, describe its function in the prevention of injury. [2 marks]

Structure \_\_\_\_\_

\_\_\_\_\_

Function \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[Turn over]



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**Following a period of intensive exercise, Rosie is experiencing excess post-exercise oxygen consumption (EPOC).**

**State what happens to Rosie’s breathing immediately after intensive exercise.**

**Explain the reasons why her breathing is like this. [4 marks]**

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**[Turn over]**



**1 2 . 1 Define concentric contraction.**

**Use a sporting example in your answer. [2 marks]**

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**1 2 . 2** Define isometric contraction.

**Use a sporting example in your answer. [2 marks]**

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**8**

**[Turn over]**



**1 3** State TWO short-term effects of exercise (24 to 36 hours after exercise). [2 marks]

1

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2

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**1 4** Fitness testing is becoming increasingly important in sports preparation and performance.

**Identify TWO limitations of fitness testing. [2 marks]**

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2

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**1 6 . 1** Give an example from the skeleton of where a hinge joint can be found. [1 mark]

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**1 6 . 2** Give an example from the skeleton of where a ball and socket joint can be found. [1 mark]

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**1 6 . 3** Define rotation.

**Use a sporting example in your answer. [2 marks]**

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**1 6 . 4** Define abduction.

**Use a sporting example in your answer. [2 marks]**

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**[Turn over]**

**6**



**1 7** Complete FIGURE 3, on page 29, to show the pathway of blood through the heart during the cardiac cycle.

Write the numbers from the following list in the boxes shown in FIGURE 3 to show the correct order of the pathway.

The first and last positions in FIGURE 3 have been completed for you. Use each number only once.  
[5 marks]

## 27

- 1 Gaseous exchange takes place (resulting in oxygenated blood)**
- 2 It passes to the left ventricle**
- 3 Deoxygenated blood enters the right atrium**
- 4 Then passes into the right ventricle**
- 5 The pulmonary vein transports (oxygenated) blood to the left atrium**
- 6 Oxygenated blood is ejected from the heart and is transported to the body via the aorta**
- 7 The pulmonary artery transports (the deoxygenated) blood to the lungs**

**[Turn over]**



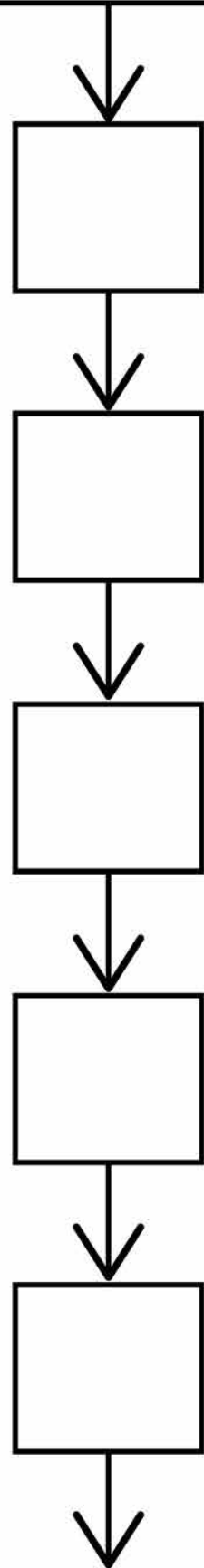
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**FIGURE 3**

**Deoxygenated blood enters the right atrium**

**3**



**Oxygenated blood is ejected from the heart and is transported to the body via the aorta**

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**5**

**[Turn over]**





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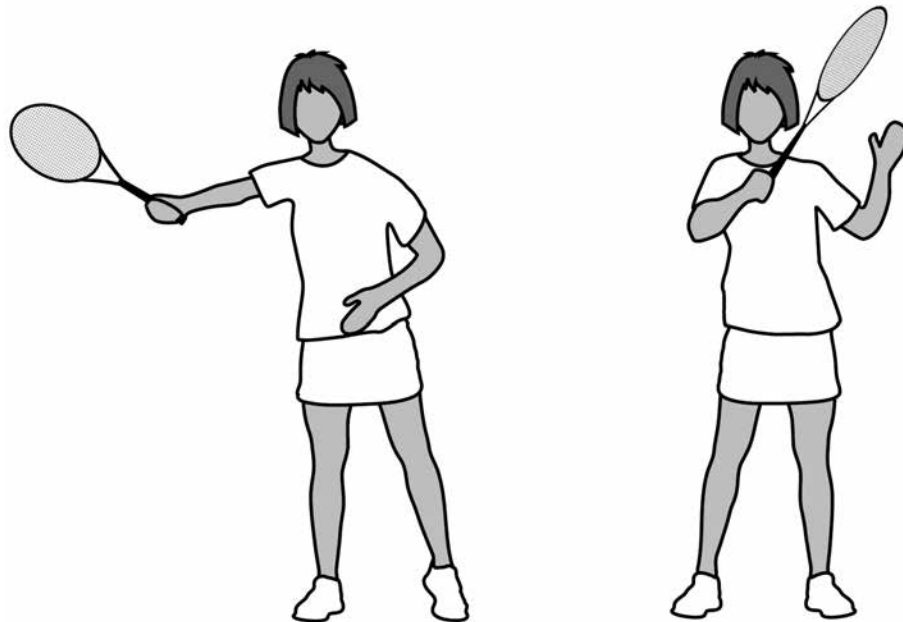
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19

**FIGURE 4 is a diagram of a forehand tennis stroke.**

**FIGURE 4**



19.1

**Identify the plane AND the axis when the arm bends at the elbow. [2 marks]**

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19.2

**Identify the type of lever being used at the elbow during the forehand tennis stroke. [1 mark]**

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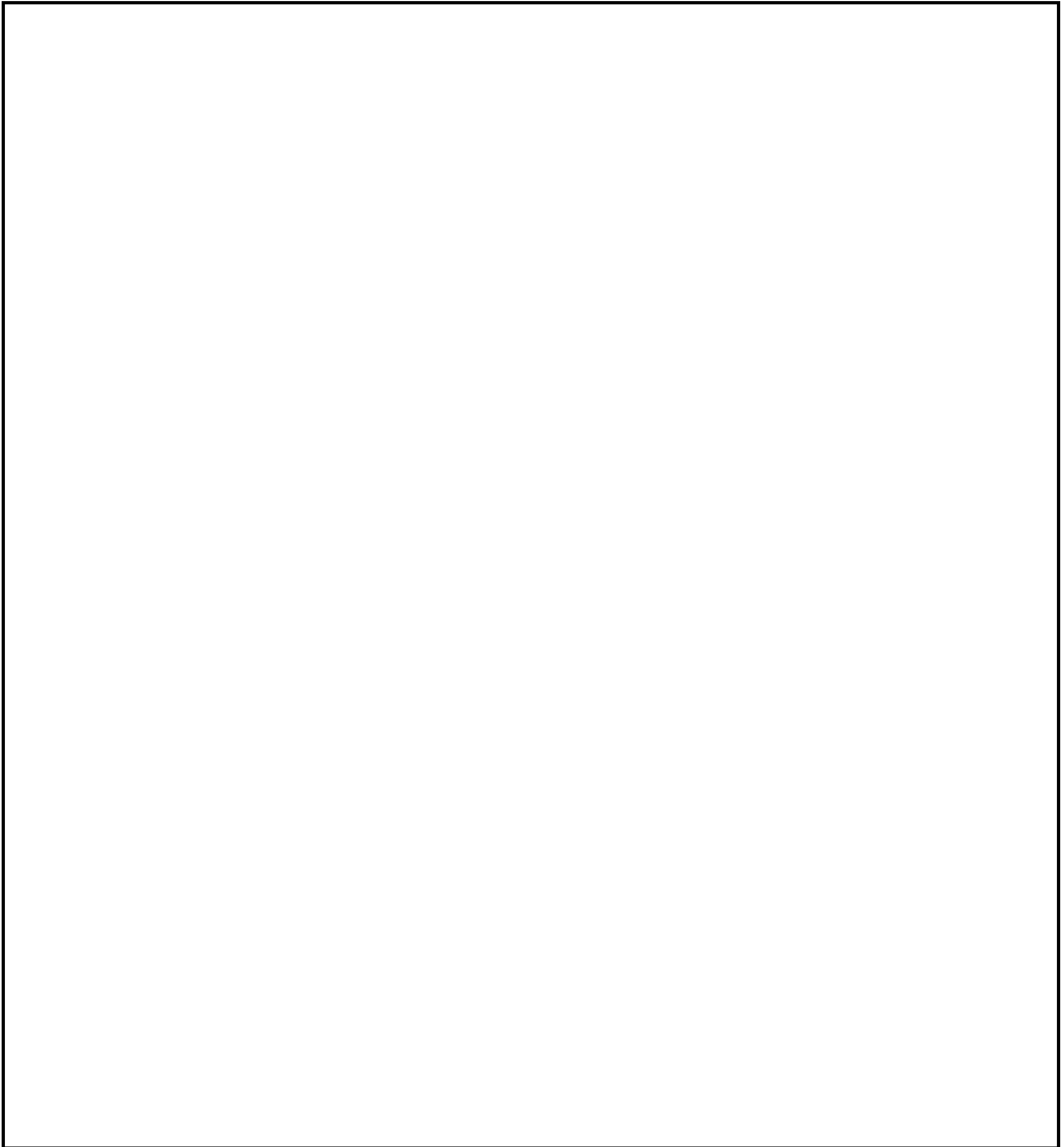


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**1 9 . 3** Draw a fully labelled diagram to show this type of lever. [2 marks]



**[Turn over]**







**2 1**

**Two female students completed the Multi Stage Fitness Test as part of their GCSE lesson. The following results were recorded.**

**Hannah who is 15 years old scored 5/7**

**Saskia who is 16 years old scored 9/9**

**TABLE 1, on the opposite page, shows the normative data for females for the Multi Stage Fitness Test.**

**2 1 . 1**

**Analyse the data in TABLE 1, on page 37. What does it show about Hannah and Saskia's levels of cardiovascular fitness? [2 marks]**

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**TABLE 1**

**MULTI STAGE FITNESS TEST (females)**

	<b>Poor</b>	<b>Fair</b>	<b>Average</b>	<b>Good</b>	<b>Very good</b>	<b>Excellent</b>
	<b>Level / Shuttle</b>	<b>Level / Shuttle</b>	<b>Level / Shuttle</b>	<b>Level / Shuttle</b>	<b>Level / Shuttle</b>	<b>Level / Shuttle</b>
<b>14–15 years</b>	<b>3/4</b>	<b>5/3</b>	<b>6/5</b>	<b>7/6</b>	<b>8/8</b>	<b>10/7</b>
<b>16–17 years</b>	<b>4/2</b>	<b>5/7</b>	<b>7/2</b>	<b>8/5</b>	<b>9/8</b>	<b>11/11</b>

**[Turn over]**



**21.2** Explain why the score for the Multi Stage Fitness Test is quantitative data. [2 marks]

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4

















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For Examiner's Use	
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TOTAL	

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# IB/M/Jun18/NC/8582/1/E3

