

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

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Pearson Edexcel Level 1/2 GCSE (9–1)

Time 1 hour 30 minutes

Paper
reference

3PE0/01

Physical Education (Short Course)

COMPONENT 1: Theory

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Q:1/1/1/1/1



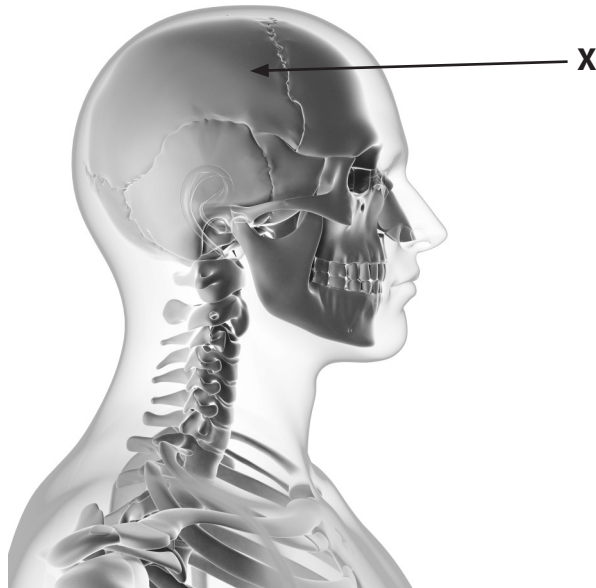
Pearson

Answer ALL questions.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 **Figure 1** shows part of the structure of the skeletal system.



(Source: © PAL)

Figure 1

(a) Which **one** of the following is the name of the bone labelled **X** in **Figure 1**?

(1)

<input type="checkbox"/>	A Carpal
<input type="checkbox"/>	B Cervical
<input type="checkbox"/>	C Clavicle
<input type="checkbox"/>	D Cranium

(b) Which **one** of the following is the role of tendons?

(1)

<input type="checkbox"/>	A Tendons join bone to bone
<input type="checkbox"/>	B Tendons join ligaments to bone
<input type="checkbox"/>	C Tendons join muscle to bone
<input type="checkbox"/>	D Tendons join muscle to muscle



(c) Which **one** of the following muscles contracts to bring about **extension** at the **hip**?

(1)

<input type="checkbox"/>	A Biceps
<input type="checkbox"/>	B Gluteus maximus
<input type="checkbox"/>	C Latissimus dorsi
<input type="checkbox"/>	D Quadriceps

(d) Which **one** of the following is a characteristic of **type IIX** muscle fibres?

(1)

<input type="checkbox"/>	A They are very fatigue resistant
<input type="checkbox"/>	B They have a large capillary network
<input type="checkbox"/>	C They produce a large amount of force
<input type="checkbox"/>	D They work aerobically



Figure 2 shows an individual's resting blood pressure as blood travels through the different types of blood vessels in the body.

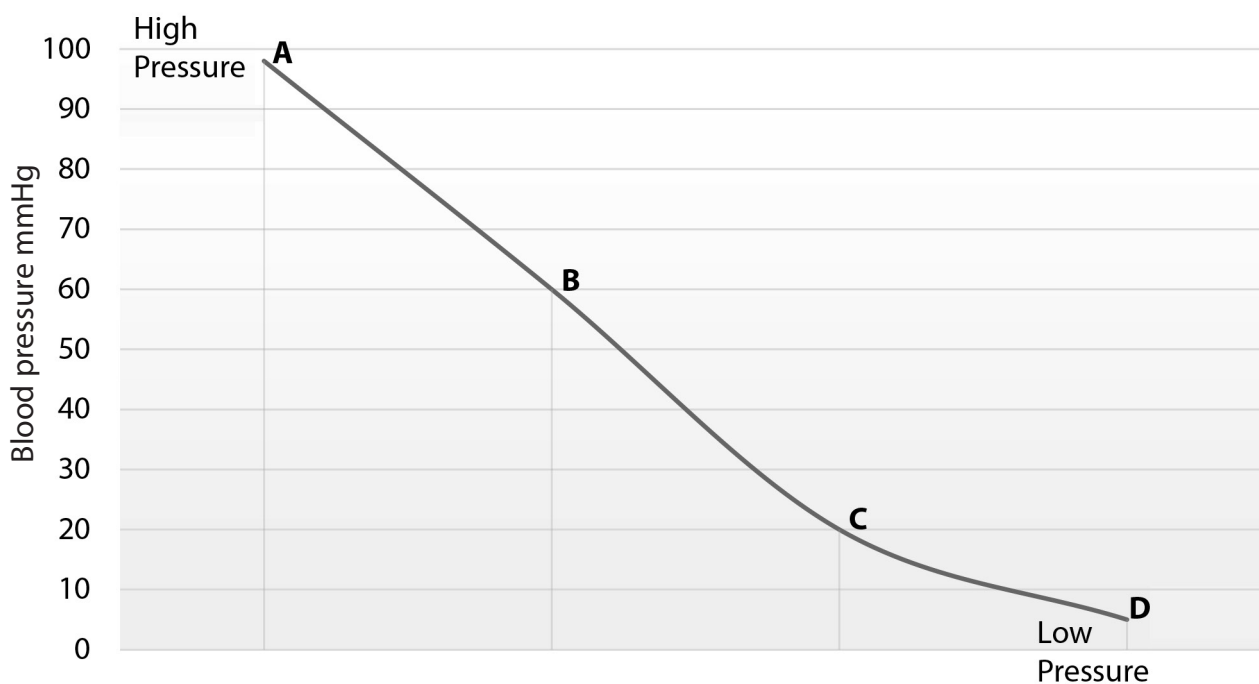


Figure 2

- (e) Which **one** of the following, **A**, **B**, **C** or **D** represents the blood pressure as the blood leaves the heart?

(1)

<input type="checkbox"/>	A
<input type="checkbox"/>	B
<input type="checkbox"/>	C
<input type="checkbox"/>	D

- (f) Which **one** of the following terms means the amount of blood leaving the heart per minute?

(1)

<input type="checkbox"/>	A Cardiac output
<input type="checkbox"/>	B Stroke volume
<input type="checkbox"/>	C Tidal volume
<input type="checkbox"/>	D Vital capacity

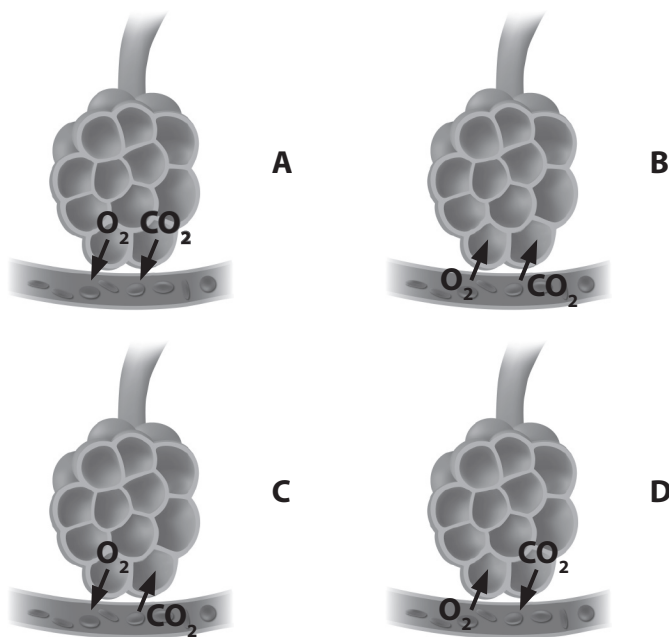


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Figure 3 shows movement of gases into and out of the alveoli in the lungs.



(Source: © PAL)

Figure 3

(g) Which **one** of the following, **A**, **B**, **C** or **D** shows the correct movement of gases from the alveoli into the capillary during gaseous exchange?

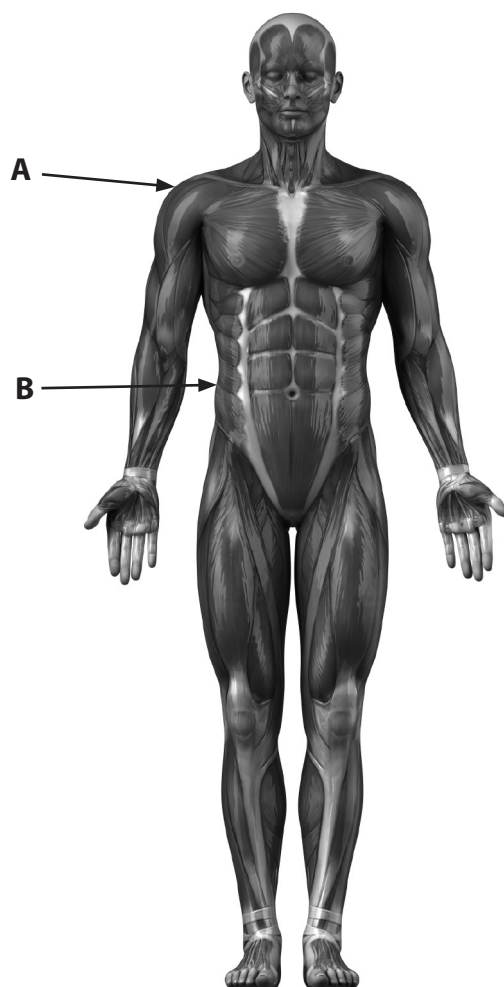
(1)

<input type="checkbox"/>	A
<input type="checkbox"/>	B
<input type="checkbox"/>	C
<input type="checkbox"/>	D

(Total for Question 1 = 7 marks)



2 **Figure 4** shows the muscular system.



(Source: © PAL)

Figure 4

Complete **Table 1** by:

- Stating the name of the labelled muscles.
- Stating the function of the labelled muscles.

Labelled muscle	(a) Name of the muscle	(b) Function of the muscle
A (pointing to the shoulder)	(1)	(1)
B (pointing to the side of the trunk)	(1)	(1)

Table 1



(c) State **one** reason why skeletal muscles are classified as **voluntary** muscles.

(1)

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(d) Explain, using an example, why **involuntary** muscles are important during sport and physical activity.

(3)

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(Total for Question 2 = 8 marks)

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3 Games players constantly change direction when playing their sport.

(a) Explain why the role of ligaments is important to games players.

(2)

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(b) Justify why a high percentage of **type IIa** muscle fibres would be an advantage to a games player.

(2)

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(d) Games players work aerobically and anaerobically during a game.

(i) Give **one** example of a games player working **aerobically** in their sport. (1)

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(ii) Give **one** example of a games player working **anaerobically** in their sport. (1)

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(e) State **one** of the by-products of **aerobic** energy production. (1)

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(Total for Question 3 = 11 marks)



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4 **Figure 5** shows a gymnast during their performance of a cartwheel.



(Source: © PAL)

Figure 5

(a) State the plane and axis used in **Figure 5** to perform this movement.

(2)

Plane

Axis

(b) State the antagonistic muscle pair acting at the elbow that allow the gymnast to extend the arm at the elbow during the cartwheel.

(2)

Agonist

Antagonist

(c) State the classification of the joint at the hip.

(1)



(d) State the type of movement that has occurred at the gymnast's hip joints to achieve the position shown in **Figure 5**. (1)

(e) Explain the importance of the short bones in the gymnast's wrists during the movement shown in **Figure 5**. (2)

(f) Describe the **range** of movement possible at condyloid joints. (3)

(Total for Question 4 = 11 marks)



5 **Figure 6** shows a footballer kicking a football. His right knee and right ankle are circled.



(Source: © OSTILL is Franck Camhi/Shutterstock)

Figure 6

Analyse the action of the antagonistic muscle pairs at the **circled** joints of the right **knee** and right **ankle** that causes the movement from **Position A** to **Position B** in **Figure 6**.

Knee

(3)

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Ankle

(3)

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(Total for Question 5 = 6 marks)



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6 There are three types of health.

(a) State the type of health missing from this definition:

Health is a state of complete physical and social well-being, and not merely the absence of disease and infirmity.

(1)

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(b) Explain **one** reason why a well-designed personal exercise programme (PEP) can improve **physical** health.

(2)

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(c) Macronutrients are very important for health and performance.

(i) Explain why power athletes need to consider the timing of protein intake.

(3)

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(ii) Describe how a long-distance runner can make sure they have enough energy to complete a marathon.

(2)

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(Total for Question 6 = 8 marks)

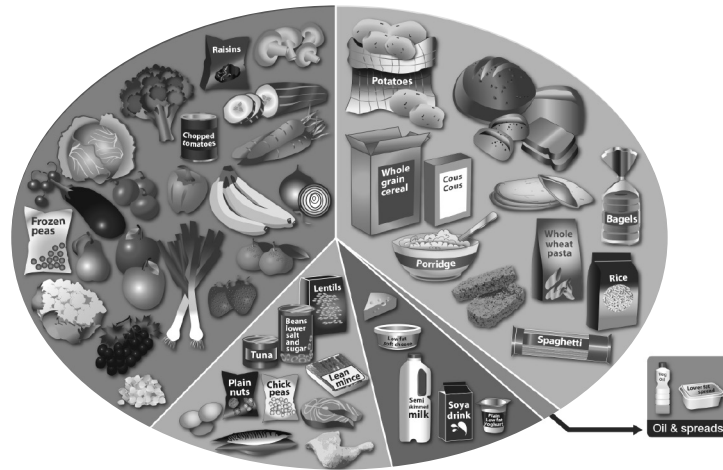
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(Source: © Adapted from NHS / <https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/>)

Figure 7

The Eatwell Guide makes recommendations of the ratios of nutrients we should eat for a balanced diet.

(a) Explain **one** reason why it is important to maintain a balanced diet.

(2)

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Many of the foods included in the Eatwell Guide shown in **Figure 7** are high in fibre.

(b) Explain **one** reason why it is important to include fibre in a balanced diet. (2)

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The Eatwell Guide recommends that we drink 6–8 glasses of water a day as part of a balanced diet.

(c) Explain **one** reason why a sports performer should drink more than the recommended 6–8 glasses of water a day. (2)

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(Total for Question 7 = 6 marks)

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8 Leading an active lifestyle to increase fitness can have positive and negative health effects.

(a) Explain **one** reason why being active can have a **negative** effect on **physical** health.

(2)

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(b) Explain **one** reason why being active can have a **positive** effect on **social** health.

(2)

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The lifestyle choices we make are important to our health.

(c) Explain why it is important to have a good work/rest/sleep balance.

(2)

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(d) Explain why smoking is considered a **negative** lifestyle choice.

(2)

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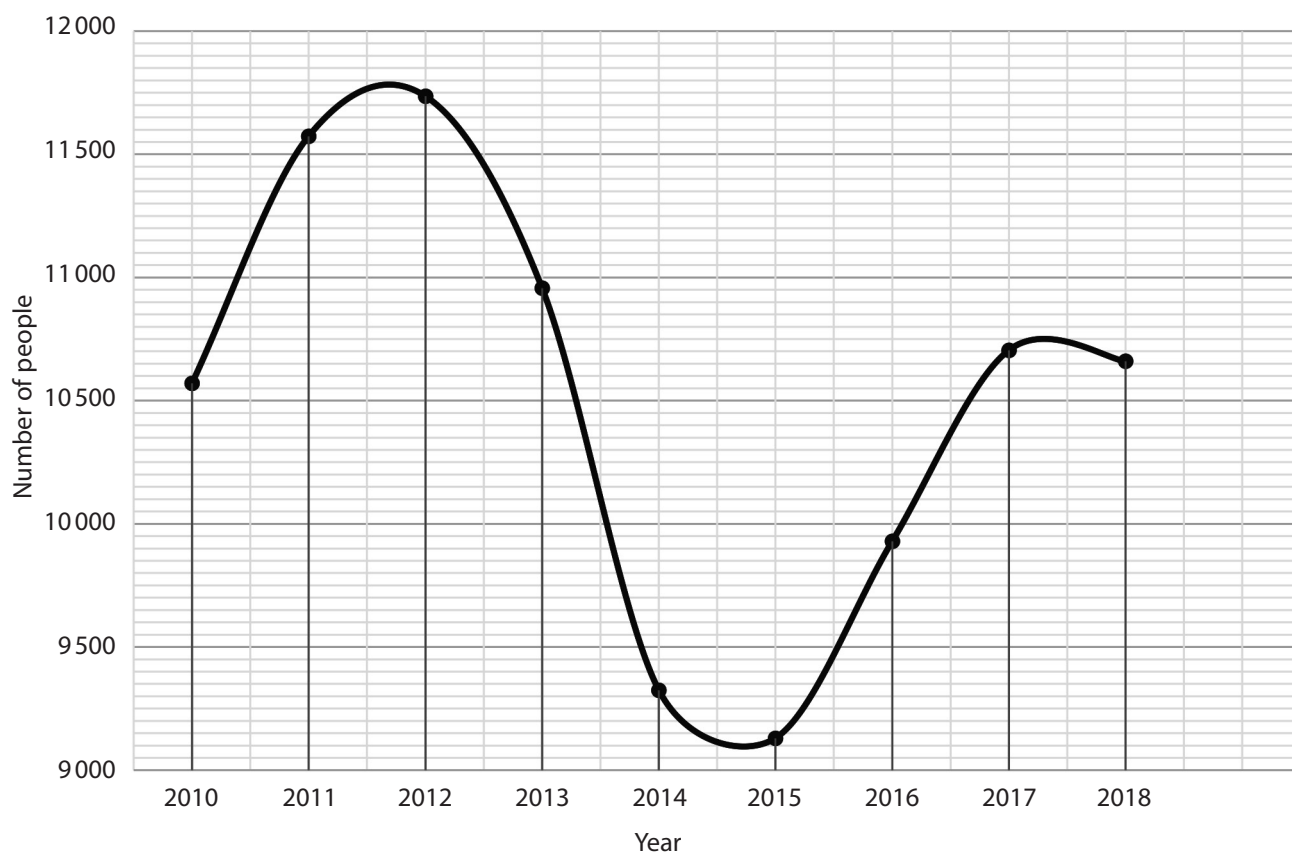
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Figure 8 shows the number of people admitted to hospital from 2010–2018 due to obesity.



(Source: © NHS / <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/england-2020/data-tables>)

Figure 8

- (e) Predict, using **Figure 8**, the most likely trend in the number of hospital admissions for obesity for the year 2018–2019.

(1)

- (f) State the year, using **Figure 8**, when the number of people admitted to hospital **increased** by the greatest number.

(1)

(Total for Question 8 = 10 marks)



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9 The optimum weight of sports performers in the same team will vary.

(a) Explain, using an example from a named sport, **one** reason why players in the same team will have a different optimum weight to each other.

(2)

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Figure 9 and **Figure 10** show performers playing the same sport.



Women's rugby match

(Source: © Mai Groves/Shutterstock)

Figure 9



Men's rugby match

(Source: © EcoPrint/Shutterstock)

Figure 10

(b) Explain **one** reason why the players in **Figure 9** have a different optimum weight to the players in **Figure 10**.

(2)

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(Total for Question 9 = 4 marks)



10 Christina plays handball. Each match lasts 60 minutes. **Figure 11** shows a handball match.

Table 2 shows three short-term effects of playing handball on Christina's body systems.



(Source: © Dan POTOR/Shutterstock)

Figure 11

Table 2

Evaluate the importance of the **three short-term effects** listed in **Table 2** on Christina's handball **performance**.

(9)

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(Total for Question 10 = 9 marks)

TOTAL FOR PAPER = 80 MARKS

