

Please check the examination details below before entering your candidate information

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| Candidate surname    |                      |                      |                      |                      | Other names          |                      |                      |                      |  |
| Centre Number        |                      |                      |                      |                      | Candidate Number     |                      |                      |                      |  |
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**Pearson Edexcel Level 1/Level 2 GCSE (9–1)**

**Monday 19 May 2025**

Afternoon (Time: 1 hour 30 minutes)

Paper reference **1PE0/01**

**Physical Education**

**COMPONENT 1: Fitness and Body Systems**

**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 in Sections A, B and C.
- 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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**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 ☒.**

### SECTION A

#### Applied anatomy and physiology and movement analysis

- 1** (a) Which **one** of the following is a role of the pectoralis major?

(1)

|                          |                                               |
|--------------------------|-----------------------------------------------|
| <input type="checkbox"/> | <b>A</b> Adduction of the arm at the shoulder |
| <input type="checkbox"/> | <b>B</b> Dorsi flexion at the ankle           |
| <input type="checkbox"/> | <b>C</b> Extension of the leg at the knee     |
| <input type="checkbox"/> | <b>D</b> Rotation of the wrist                |

- (b) Which **one** of the following bones is in the lower arm?

(1)

|                          |                  |
|--------------------------|------------------|
| <input type="checkbox"/> | <b>A</b> Fibula  |
| <input type="checkbox"/> | <b>B</b> Humerus |
| <input type="checkbox"/> | <b>C</b> Radius  |
| <input type="checkbox"/> | <b>D</b> Sternum |

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

(1)

|                          |                                               |
|--------------------------|-----------------------------------------------|
| <input type="checkbox"/> | <b>A</b> Allow movement of the bones          |
| <input type="checkbox"/> | <b>B</b> Increase joint stability             |
| <input type="checkbox"/> | <b>C</b> Join bone to bone                    |
| <input type="checkbox"/> | <b>D</b> Reduce the risk of injury at a joint |



(d) Which **one** of the following is the function of platelets?

(1)

|                          |                                    |
|--------------------------|------------------------------------|
| <input type="checkbox"/> | <b>A</b> Clot an open wound        |
| <input type="checkbox"/> | <b>B</b> Fight infection           |
| <input type="checkbox"/> | <b>C</b> Regulate body temperature |
| <input type="checkbox"/> | <b>D</b> Transport oxygen          |

(Total for Question 1 = 4 marks)

2 Our skeleton helps us when we play sport.

Complete **Table 1** by:

- (a) Stating the name of the bone used in the sporting example.
- (b) Stating the classification of the bone used in the sporting example.

| Sporting example                                        | (a) Name of the bone | (b) Classification of bone |
|---------------------------------------------------------|----------------------|----------------------------|
| Reducing the risk of concussion when heading a football | (1)                  | (1)                        |
| Supporting majority of body weight in a handstand       | (1)                  | (1)                        |

**Table 1**

**(Total for Question 2 = 4 marks)**



3 **Figure 1** shows an athlete performing a side plank.



(Source: © Vladimir Sukhachev/Shutterstock)

**Figure 1**

Using **Figure 1** complete the following statements:

- (a) The movement is occurring in the ..... plane. (1)
- (b) The muscle that allows the athlete to lift the arm at the shoulder is called the ..... (1)
- (c) The shoulder is an example of a ..... joint. (1)
- (d) The type of movement that has occurred at the left hip is ..... (1)

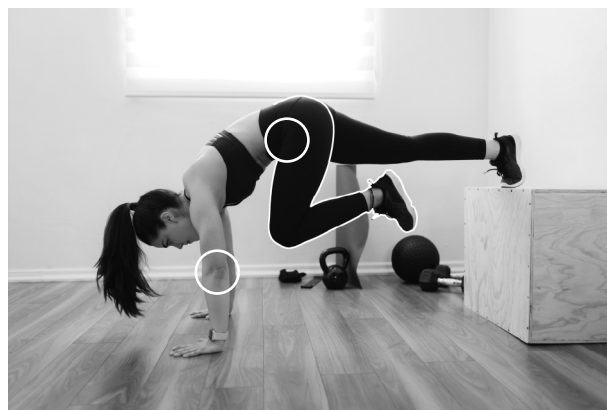
**(Total for Question 3 = 4 marks)**

4 **Figure 2** shows an athlete during a training exercise.

Her left elbow and left hip are circled.



**Position A**



**Position B**

(Source: © antoniodiaz/Shutterstock)

**Figure 2**

Analyse the actions of the antagonistic muscle pairs at the **circled** joints of the left **elbow** and left **hip** that allow the athlete to move from **Position A** to **Position B** in **Figure 2**.

(i) **Left elbow**

(3)

Left elbow: .....

.....

.....

.....

.....

.....

.....

.....

(ii) **Left hip**

(3)

Left hip: .....

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**(Total for Question 4 = 6 marks)**

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5 One characteristic of **type I** muscle fibres is a high capillary supply.

(a) State **one other** characteristic of type I muscle fibres.

(1)

(b) Name **one athletics event** where the athletes would benefit from a high percentage of type I muscle fibres.

(1)

Athletics event: .....

(c) Explain why a high capillary supply would be an advantage to an athlete.

(3)

(Total for Question 5 = 5 marks)





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**(Total for Question 6 = 4 marks)**

The concentration of carbon dioxide in inhaled and exhaled air will vary during a long-distance run.

- 7 (a) Explain the difference between carbon dioxide concentration in inhaled and exhaled air during a long-distance run.

(3)

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- (b) Explain **one** reason why breathing rate remains high immediately after exercise.

(3)

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(Total for Question 7 = 6 marks)



8 Participation in sport is possible because of the body's lever systems.

Complete **Table 2** by:

- (a) Stating the lever system from the example of its use.
- (b) Stating the fulcrum for each example.
- (c) Stating the muscle providing the effort.

| Example of use                  | (a) Lever system | (b) Fulcrum | (c) Muscle providing the effort |
|---------------------------------|------------------|-------------|---------------------------------|
| Take off in high jump           | (1)              | (1)         | (1)                             |
| Kicking a football for distance | (1)              | (1)         | (1)                             |

**Table 2**

A third class lever system has a mechanical disadvantage.

- (d) State what is meant by a **mechanical disadvantage**.

(1)

(Total for Question 8 = 7 marks)

**TOTAL FOR SECTION A = 40 MARKS**

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 ☒.

## SECTION B

### Physical training

- 9 (a) Which **one** of the following is a correct definition of fitness?

(1)

|                          |                                                                         |
|--------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> | <b>A</b> A form of physical activity done to maintain or improve health |
| <input type="checkbox"/> | <b>B</b> A state of complete emotional, physical and social wellbeing   |
| <input type="checkbox"/> | <b>C</b> The ability to meet the demands of the environment             |
| <input type="checkbox"/> | <b>D</b> The outcome of an athlete's potential, ability and training    |

**Table 3** shows the ratings from four sports performers fitness tests.

| Fitness test              | Performer |           |           |           |
|---------------------------|-----------|-----------|-----------|-----------|
|                           | A         | B         | C         | D         |
| 30m sprint                | Very good | Excellent | Excellent | Excellent |
| Illinois agility run test | Good      | Poor      | Very good | Very good |
| One-minute press-up       | Excellent | Average   | Average   | Very good |
| Vertical jump             | Good      | Excellent | Good      | Poor      |

**Table 3**

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(b) Which **one** of the performers in **Table 3** is the most powerful?

(1)

|                          |                      |
|--------------------------|----------------------|
| <input type="checkbox"/> | <b>A</b> Performer A |
| <input type="checkbox"/> | <b>B</b> Performer B |
| <input type="checkbox"/> | <b>C</b> Performer C |
| <input type="checkbox"/> | <b>D</b> Performer D |

(c) Which **one** of the performers in **Table 3** is **most** suitable for the 100m?

(1)

|                          |                      |
|--------------------------|----------------------|
| <input type="checkbox"/> | <b>A</b> Performer A |
| <input type="checkbox"/> | <b>B</b> Performer B |
| <input type="checkbox"/> | <b>C</b> Performer C |
| <input type="checkbox"/> | <b>D</b> Performer D |

(d) Which **one** of the performers in **Table 3** has the best muscular endurance?

(1)

|                          |                      |
|--------------------------|----------------------|
| <input type="checkbox"/> | <b>A</b> Performer A |
| <input type="checkbox"/> | <b>B</b> Performer B |
| <input type="checkbox"/> | <b>C</b> Performer C |
| <input type="checkbox"/> | <b>D</b> Performer D |

(Total for Question 9 = 4 marks)

10 **Figure 3** shows a dancer during a routine.



(Source: © Julenochek/Shutterstock)

**Figure 3**

Complete **Table 4** by:

- Stating how the dancer in **Figure 3** is using each component of fitness.
- Stating **one** training method to improve each component of fitness.
- Stating **one** fitness test to measure each component of fitness.

| Component of fitness | (a) How component is being used in Figure 3 | (b) Training method for the component of fitness | (c) Fitness test for the component of fitness |
|----------------------|---------------------------------------------|--------------------------------------------------|-----------------------------------------------|
| Strength             | (1)                                         | (1)                                              | (1)                                           |
| Flexibility          | (1)                                         | (1)                                              | (1)                                           |

**Table 4**

The dancer uses strength and flexibility during a routine.

- (d) State **two other** components of fitness the dancer needs to hold the position shown in **Figure 3**.

(2)

1 .....

2 .....

The dancer follows safety rules during training and uses appropriate protective clothing and equipment to remain injury free.

- (e) Explain **two other** ways the dancer can reduce the risk of injury during training.

(i)

(3)

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.....

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(ii)

(3)

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(Total for Question 10 = 14 marks)

**11 Table 5** provides values for Jude's heart rate, stroke volume and cardiac output at rest.

|        | (i) Resting heart rate | (ii) Resting stroke volume | (iii) Resting cardiac output |
|--------|------------------------|----------------------------|------------------------------|
| Values | 75bpm                  | 75ml                       | 5.6L/min                     |

**Table 5**

- (a) Explain what would happen to **each** of the values in **Table 5** after Jude completes an eight-week aerobic training programme.

Use a **different** explanation for each value.

- (i) Resting heart rate

(2)

- (ii) Resting stroke volume

(2)

- (iii) Resting cardiac output

(2)

- (b) State the component of fitness Jude is trying to improve by following an aerobic training programme.

(1)





Jude is a cross-country runner.

- (c) Explain why Jude chooses Fartlek training to prepare for their next cross-country race.

(3)

Long-term training can benefit our skeletal system.

- (d) Explain **one** long-term training effect on the skeletal system that would benefit Jude's cross country performance.

(3)

(Total for Question 11 = 13 marks)

**TOTAL FOR SECTION B = 31 MARKS**

## SECTION C

### Extended writing question

**12** Some elite athletes are tempted to take performance enhancing drugs (PEDs).

Evaluate the effects of anabolic steroids, narcotic analgesics and diuretics on a 100m sprinter's performance.

(9)

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(Total for Question 12 = 9 marks)

**TOTAL FOR SECTION C = 9 MARKS**  
**TOTAL FOR PAPER = 80 MARKS**

