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Candidate signature

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I declare this is my own work.

# A-level PHYSICAL EDUCATION

Paper 2 Factors affecting optimal performance in physical activity  
and sport

Time allowed: 2 hours

## Materials

For this paper you may use:

- 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 the questions in the spaces provided. Do **not** write 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 105.
- 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	
Section	Mark
A	
B	
C	
<b>TOTAL</b>	



J U N 2 2 7 5 8 2 2 0 1

**Section A****Exercise physiology and biomechanics**Answer **all** questions in this section.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 the following is a definition of the term 'mass'?**[1 mark]****A** The amount of space a body occupies**B** The gravitational force exerted on an object**C** The quantity of matter a body possesses

0 2

Figure 1 shows an athlete throwing a javelin.

Figure 1



Which lever system is operating at the elbow as the javelin is released during the execution of the throw?

[1 mark]

- A First class
- B Second class
- C Third class

Turn over ►



0 3 . 1

The data gathered from a fitness test can be either quantitative or qualitative.

Define the terms quantitative **and** qualitative.

[2 marks]

Quantitative \_\_\_\_\_

\_\_\_\_\_

Qualitative \_\_\_\_\_

\_\_\_\_\_

0 3 . 2

State **two** factors that can affect the reliability of a fitness test.

[2 marks]

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_



0 4

The start of a 100 m sprint race requires athletes to accelerate as quickly as they can out of the blocks.

0 4 . 1

Acceleration is a vector quantity.

Define what is meant by a vector quantity.

[1 mark]

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0 4 . 2

**Table 1** shows the velocity of a sprinter measured at 10 m intervals, as well as the split times for each 10 m segment of the race.

**Table 1**

<b>Distance at end of 10 m split (m)</b>	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>	<b>50</b>
Split time (s)	2	1.5	0.9	0.8	0.8
Velocity at the end of the split (m/s)	4	10	11	12	12

Calculate the sprinter's acceleration between 10 and 20 m using the data in **Table 1**.

Give the correct units in your answer.

[2 marks]

Sprinter's acceleration \_\_\_\_\_ Units \_\_\_\_\_

Turn over ►



0 5

Evaluate the suitability of including high-intensity interval training (HIIT) in **either** a basketball **or** a netball team's training programme.

**[3 marks]**

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**Section B**

**Sport psychology**

Answer **all** questions in this section.

**0 8**

'Interpersonal differences begin to be resolved and a sense of cohesion emerges'.

Which stage of Tuckman's model is described in this statement?

**[1 mark]**

**A** Forming

**B** Norming

**C** Performing

**D** Storming

**0 9**

Which component of an attitude involves a person's emotions?

**[1 mark]**

**A** Affective

**B** Behavioural

**C** Cognitive



1 0

A performer's likelihood of success is influenced by them having a positive attitude.

Describe **four** factors which may lead to the formation of a positive attitude.

**[4 marks]**

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

1 1

Hollander's model is one example of an interactionist perspective of personality.

Explain how a coach can apply knowledge of Hollander's model of personality to improve performance. Refer to each level of the model in your answer.

**[3 marks]**

\_\_\_\_\_

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Turn over ►



1 2

Evaluate the impact of extrinsic rewards on a performer's motivation.

**[3 marks]**

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**Section C**

**Sport and society and technology in sport**

Answer **all** questions in this section.

**1 5**

Which **one** of the following organisations provides support to **both elite and** participation level sport?

**[1 mark]**

**A** National Governing Bodies

**B** National Institutes of Sport

**C** UK Sport

**1 6**

Which **one** of the following would benefit most from taking beta blockers?

**[1 mark]**

**A** Golfer

**B** Marathon runner

**C** Rugby player

**D** Sprinter

**1 7**

Maintaining data integrity ensures the accuracy, consistency and completeness of data whilst it is collected, stored and shared.

State **three** ways that data integrity can be maintained.

**[3 marks]**

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_



**1 8 . 1** Define the term 'negligence'.

**[1 mark]**

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**1 8 . 2** Give **three** examples of negligence by a rugby official.

**[3 marks]**

1 \_\_\_\_\_

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2 \_\_\_\_\_

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3 \_\_\_\_\_

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**1 9** 'The use of performance enhancing drugs should be allowed in sport.'

Evaluate this statement.

**[3 marks]**

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**Turn over ►**

















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