

A-level PHYSICAL EDUCATION

Paper 2 Factors affecting optimal performance in physical activity and sport

Specimen 2018

Morning

Time allowed: 2 hours

Materials

For this paper you may 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 bottom of this page.
- Answer **all** questions. You must answer the questions in the spaces 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 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.

Please write clearly, in block capitals, to allow character computer recognition.

Centre number

Candidate number

Surname

Forename(s)

Candidate signature _____

Section A

Exercise physiology and biomechanics

Answer **all** questions in this section.

For questions with four responses only **one** answer per question is allowed.


For each answer completely fill in the circle alongside the appropriate answer.


CORRECT METHOD



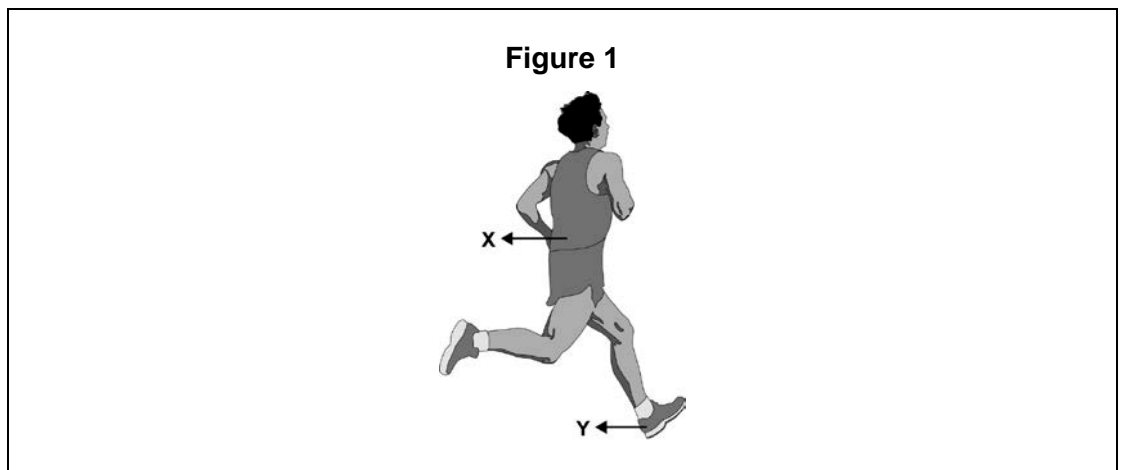
WRONG METHODS



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. 

0 1



Identify the forces labelled **X** and **Y** in **Figure 1** that act on the runner during a race.

A X: Air resistance Y: Friction

B X: Friction Y: Air resistance

C X: Gravity Y: Air resistance

D X: Weight Y: Friction

[1 mark]

0 2

Training methods are used to improve physical health and fitness.

Which **one** of the following training methods would be used to improve aerobic endurance?

A Circuit training

B Continuous training

C PNF

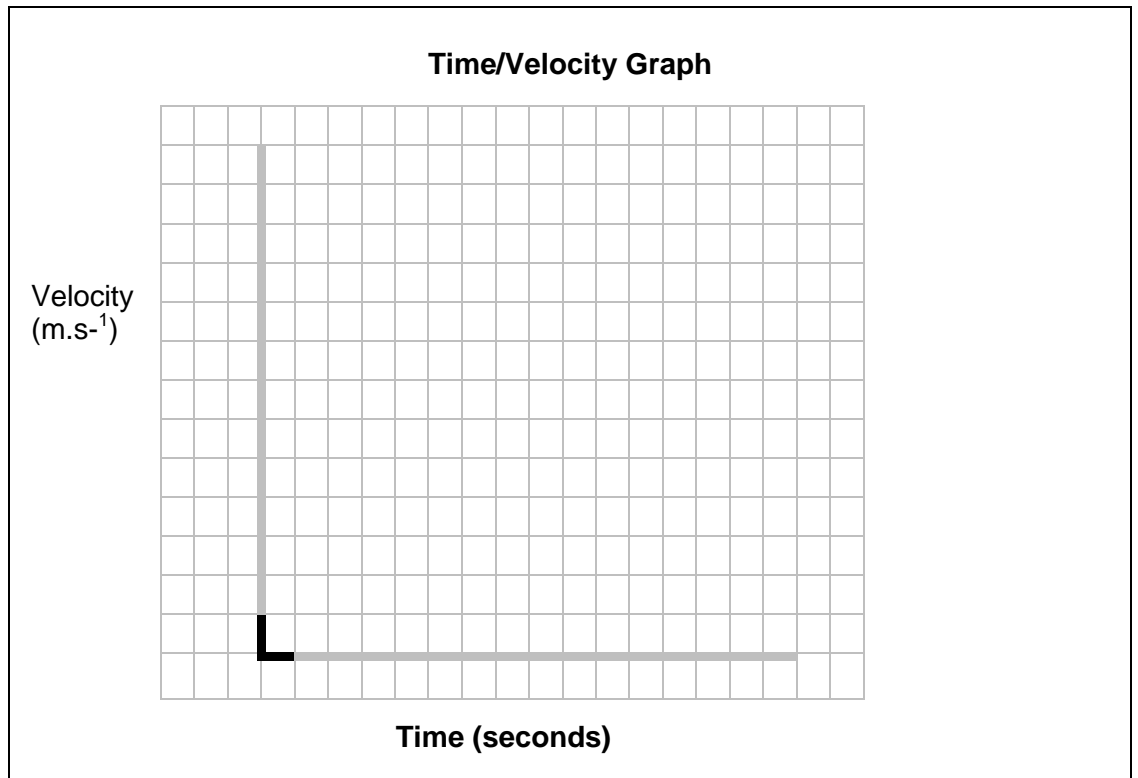
D Weight training

[1 mark]

Turn over for the next question

0 3**Table 1** shows time and velocity data for the first 6 seconds of a 100m sprint.

Time (seconds)	0	1	2	3	4	5	6
Velocity (m.s^{-1})	0	7	8.5	9	9.5	10	9.5

**0 3****1** Plot the points from **Table 1** on the time/velocity graph.**[2 marks]****0 3****2** Identify the period of time when acceleration was the greatest.**[1 mark]**

0 4 . **1** Discus is another athletic event.

Describe how a lift force can be generated by a discus in flight.

[4 marks]

0 4 . **2** Explain how a high angle of attack will affect the distance travelled by the discus.

[3 marks]

Turn over for the next question

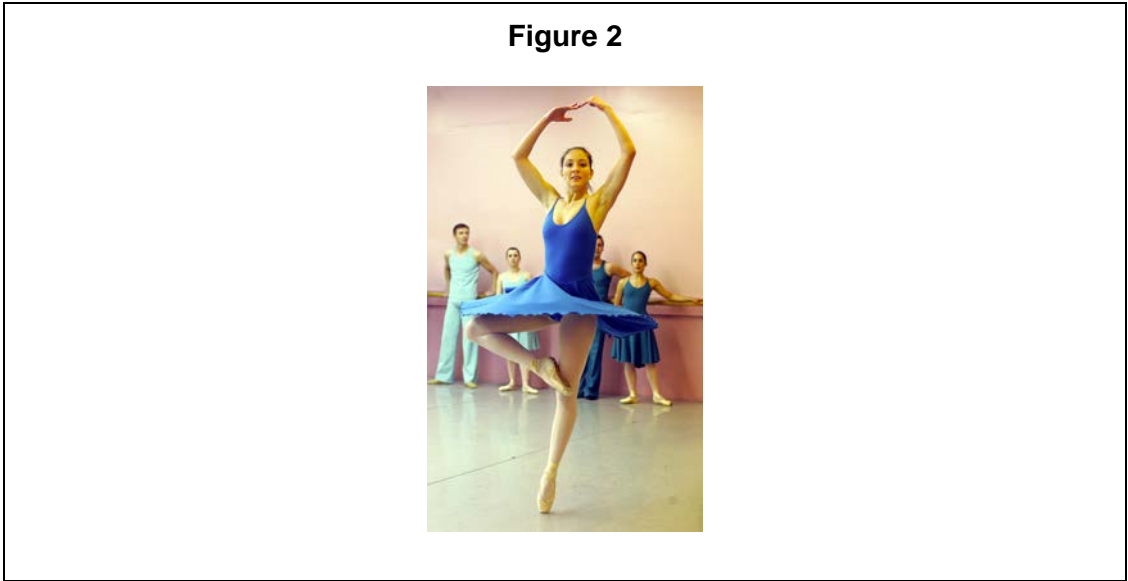
0	5
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Explain why the physical preparation and mental preparation for performers in golf and in rugby may differ.

[8 marks]

0 6

Figure 2 shows a dancer performing a spin as part of a routine.



Explain Newton's Laws of Motion in relation to the dancer spinning **and** how the dancer can alter her rate of spin.

[15 marks]

You may use this space to plan your answer.

Turn over for the next section

Section B**Sports psychology**Answer **all** questions in this section.

0 7

The inverted U theory suggests optimal arousal can improve performance.

Which **one** of the following statements is correct?

- A** Complex skills require lower levels of arousal
- B** Experienced performers require lower levels of arousal
- C** Introverts require higher levels of arousal
- D** Simple skills require lower levels of arousal

[1 mark]**0 8**The Theory of Achievement Motivation suggests there are **two** personality types: Need to Achieve and Need to Avoid Failure.Which **one** of the following statements best describes the characteristics of a performer with a Need to Achieve personality?

- A** Complete task quickly, attribute failure to external factors, choose challenging tasks, enjoy performing in front of others
- B** Complete task quickly, persevere, choose challenging tasks, enjoy performing in front of others
- C** Complete task quickly, persevere, choose easy or hard tasks, enjoy performing in front of others
- D** Complete task quickly, worry about failure, choose challenging tasks, enjoy performing in front of others

[1 mark]**Turn over for the next question**

0 9

Motivation is used to increase the effort and persistence of a performer.

Explain how a coach can use different forms of motivation to improve performance.
Use examples to support your answer.

[3 marks]

1 0

Fiedler suggests that a task-orientated style of leadership should be used if the situation is classed as favourable.

Using an example, outline the characteristics of a favourable situation.

[3 marks]

1 1**Figure 3** shows Weiner's Model of attribution.

		Locus of Causality	
		Internal	External
Locus of Stability	Stable	Ability	C
	Unstable	B	D

Define the term attribution **and**, using sporting examples, describe the different attributions labelled **B**, **C** and **D**.

[4 marks]

Turn over for the next question

Extra space

Section C**Sport and society and technology in sport**

Answer **all** questions in this section.

1 | 4

Which **one** of the following definitions best describes the term deviancy?

- A** Behaviour which goes against society's norms and values
- B** Not playing by the unwritten rules
- C** Not showing opponents respect
- D** Taking drugs to enhance performance

[1 mark]**1 | 5**

Which **one** of the following definitions best describes the term sponsorship?

- A** An athlete's money held by a national governing body until retirement from sport
- B** Athletes personally endorse a company's merchandise
- C** Disposable income
- D** Financial support provided to an individual performer or event of a mutual return

[1 mark]

Turn over for the next question

1 6

Explain how the structure of the World Class Performance Pathway supports the development of elite athletes.

[3 marks]

1 7

State how the technological development of facilities and equipment can help to optimise elite performance.

[4 marks]

1 8

Evaluate the reasons why elite athletes will resort to taking illegal performance enhancing drugs.

[3 marks]

There are no questions printed on this page

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ANSWER IN THE SPACES PROVIDED**

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