



General Certificate of Education  
Advanced Level Examination  
June 2013

## Physical Education

## PHED3

### Unit 3 Optimising Performance and Evaluating Contemporary Issues within Sport

Wednesday 19 June 2013 1.30 pm to 3.30 pm

**For this paper you must have:**

- an AQA 16-page answer book.

**Time allowed**

- 2 hours

**Instructions**

- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is PHED3.
- Answer **nine** questions.
- In **Section A**, **Section B** and **Section C**, answer the **first** question and **two** other questions from this section.
- Do all rough work in your answer book. Cross through any work that you do not want to be marked.

**Information**

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 84.
- Question 1, Question 5 and Question 9 should be answered in continuous prose.
- In these questions, you will be marked on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

## Section A

Answer **three** questions.

Answer Question 1 **and** any two from Question 2, Question 3 **or** Question 4.

### Question 1

In 2012, Jessica Ennis won the Olympic Heptathlon title, which involved running, throwing and jumping over two days of competition, as shown in **Figures 1, 2 and 3**.

**Figure 1**



**Figure 2**



**Figure 3**



To maximise performance during competition, a performer must develop their flexibility and ensure that their body maintains the correct water and electrolyte balance.

**0 1**

Explain how a performer uses proprioceptive neuromuscular facilitation (PNF) to increase flexibility, **and** outline the physiological changes that will occur if the correct water and electrolyte balance is not maintained. (14 marks)

### Question 2

Heptathletes are required to complete the 200 metre sprint, as shown in **Figure 1**.

**0 2**

A 200 metre runner must exert a large force in a short period of time to generate an impulse. Sketch and label a graph to show the impulse generated during the acceleration phase of a 200 metre race. (3 marks)

**0 3**

With reference to the Sliding Filament Hypothesis, explain the roles of tropomyosin and troponin during muscle contraction. (4 marks)

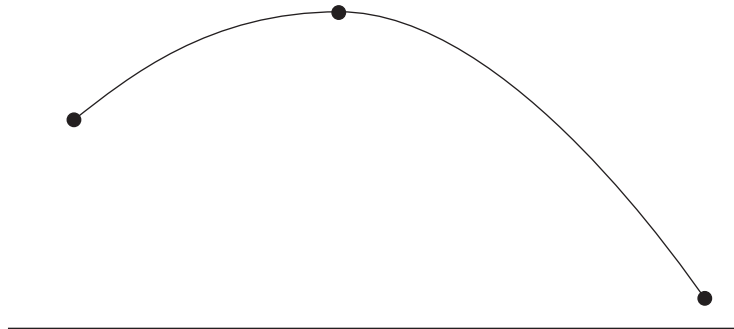
**Question 3**

One event in the heptathlon is the shot put, as shown in **Figure 2**. This involves one powerful, explosive movement.

**0 | 4** Name **three** factors that affect the distance the shot travels. (1 mark)

**Figure 4** shows the flight path of a shot.

**Figure 4**



**0 | 5** Copy **Figure 4** and label your diagram to show the changing vertical and horizontal vectors at the following points:

- the point of release
  - the highest point of flight
  - the point immediately before landing.
- (3 marks)

**0 | 6** Explain how energy is provided, allowing the athlete to complete the shot put. (3 marks)

**Question 4**

Athletes must have sufficient energy stores to compete and perform in a variety of weather conditions.

**0 | 7** Identify the energy sources that a performer may use during competition. (3 marks)

Thermoregulation is essential in maintaining the correct body temperature.

**0 | 8** Explain how thermoregulation is achieved by the body during exercise. (4 marks)

**Turn over for the next section**

**Turn over ►**

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**Section B**

Answer **three** questions.

Answer Question 5 **and** any two from Question 6, Question 7 **or** Question 8.

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**Question 5**

Sporting contests require the performer's full commitment, both physically and psychologically. The performance of some individuals can be hindered by over-arousal.

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Explain, using appropriate psychological theories, the possible causes of aggressive behaviour during sporting contests **and** suggest strategies that a coach could use to develop the assertive behaviour of a performer. *(14 marks)*

**Question 6**

Elite performers have to develop high levels of self-confidence to optimise their performance.

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What do you understand by the term learned helplessness? *(3 marks)*

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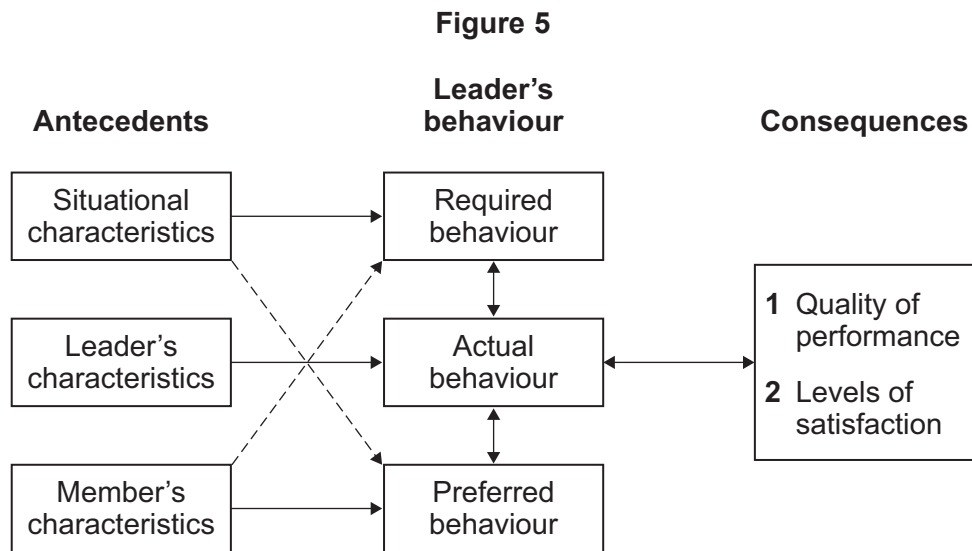
Explain how the self-efficacy of a performer may be improved. *(4 marks)*

### Question 7

The performer and the coach must work together so that the performer can control their arousal levels during a competition.

- 1 2** Identify **three** characteristics of the peak flow experience. (3 marks)

**Figure 5** shows Chelladurai's multi-dimensional model of leadership.



When quality of performance and levels of satisfaction are high, optimal levels of arousal are more likely.

- 1 3** Use **Figure 5** to explain how a coach can help the performer to reach optimal levels of arousal. (4 marks)

### Question 8

Many elite performers complete personality and anxiety tests as part of their preparation for competition.

- 1 4** Name **one** self-report questionnaire often used to measure anxiety **and** outline the disadvantages of using this form of data collection. (3 marks)

- 1 5** How can knowledge of the interactionist theory of personality help a coach to improve the performance of an individual player? (4 marks)

**Turn over for the next section**

**Turn over ►**

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**Section C**

Answer **three** questions.

Answer Question 9 **and** any two from Question 10, Question 11 **or** Question 12.

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**Question 9**

The modern Olympic Games have changed in nature and size since Baron Pierre de Coubertin organised the 1896 Athens Games, which involved only amateur performers competing in nine sports.

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Explain the social factors **and** the support programmes in the UK that encourage the development of elite athletes and increase the chance of winning medals. *(14 marks)*

**Question 10**

The 19th century English public schools had a major impact on the development of rational recreation and the sporting values of the modern Olympic Games.

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What are the similarities between the sporting values of the 19th century English public schools and the modern Olympic Games? *(3 marks)*

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Explain how, during the 19th century, ex-public school boys influenced the development of sport in the UK and around the world. *(4 marks)*

**Question 11**

At the London 2012 Olympic Games, billions of people watched both amateurs and professionals competing in 26 sports.

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Suggest reasons why the International Olympic Committee (IOC) has allowed professional performers to compete at the Olympic Games in recent years. *(3 marks)*

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Discuss the suggestion that the increased media coverage of elite sport has had a positive impact on coaches. *(4 marks)*

**Question 12**

There have been many examples of deviancy throughout the history of the modern Olympic Games, even though all performers agree to the Olympic Oath.

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 Explain the terms positive deviancy and negative deviancy. Use practical examples to support your answer. *(3 marks)*
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 Suggest reasons why there have been very few instances of spectator violence at the modern Olympic Games compared with some other major sporting events. *(4 marks)*

**END OF QUESTIONS**

**There are no questions printed on this page**

Figure 1: © Getty Images  
Figure 2: © Getty Images  
Figure 3: © Getty Images

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