

A-level PHYSICAL EDUCATION

Unit 3 Optimising Performance and Evaluating Contemporary Issues within Sport

Friday 16 June 2017

Morning

Time allowed: 2 hours

Materials

For this paper you must have:

- an AQA 16-page answer book.

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 **Paper Reference** is PHED3.
- Answer **nine** questions.
- In **Section A**, **Section B** and **Section C**, answer the **first** question and **two** other questions from each section.
- Do all rough work in your answer 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 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: Applied Physiology to Optimise Performance

Answer **three** questions.

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

Question 1

Elite games performers require high levels of fitness and the ability to recover quickly.

0	1
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Explain the importance of a high VO_2 max **and** outline how Excess Post-exercise Oxygen Consumption (EPOC) aids recovery and performance.

[14 marks]

Question 2

Elite athletes plan their training programmes and develop specific energy systems to optimise their performance.

Periodisation is the planning of a structured training programme.

0	2
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Explain each of the following terms:

- micro-cycle
- meso-cycle
- macro-cycle.

[3 marks]

The aerobic system is an important energy system for many sports.

0	3
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Describe the process of ATP resynthesis in the mitochondria.

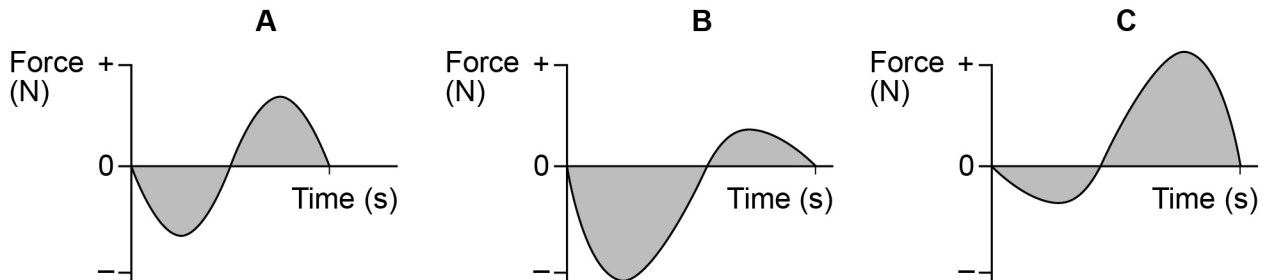
[4 marks]

Question 3

During sporting events performers have to apply force to execute skills correctly.

Figure 1 shows three impulse graphs of a sprinter at different stages of a 100 metre race.

Figure 1



0 4

Identify which impulse graph represents the start, middle and end of the race. For each graph justify your reason.

[3 marks]

The sliding filament hypothesis states that muscular contraction occurs in the sarcomeres of the muscle fibres.

0 5

Outline the process of muscle contraction that occurs within the muscle sarcomere.

[4 marks]

Question 4

Elite performers use a variety of methods to prepare for competition and have to compete in different environments.

Some elite performers take illegal substances in an attempt to improve their performance.

0 6

Explain the possible advantages of taking the following substances **and** identify the type of sporting activities in which they may be used.

- Human Growth Hormone (HGH)
- Betablockers

[2 marks]

0 7

Identify **and** explain how a performer maintains their optimum body temperature by thermoregulation during warm conditions.

[5 marks]

Turn over for the next section

Turn over ►

Section B: Psychological Aspects that Optimise Performance

Answer **three** questions.

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

Question 5

In 2015 the Great Britain tennis team won the Davis Cup for the first time in 79 years. This achievement required effective teamwork and good leadership.

0	8
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Name **and** explain the stages of group formation **and** using Chelladurai's and Fiedler's leadership models, explain how a leader can ensure a group work together to achieve success.

[14 marks]

Question 6

Elite performers may display different levels of confidence.

0	9
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Explain how learned helplessness can affect the performance of an individual.

[3 marks]

1	0
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Suggest strategies a coach could use to avoid a performer experiencing learned helplessness.

[4 marks]

Question 7

Talent identification schemes often use self-report questionnaires in the selection process to identify individuals with specific personalities.

When using self-report questionnaires individuals may lie or provide socially desirable answers which affect the results.

1	1
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Outline other disadvantages of using questionnaires as a method for testing personality.

[3 marks]

1	2
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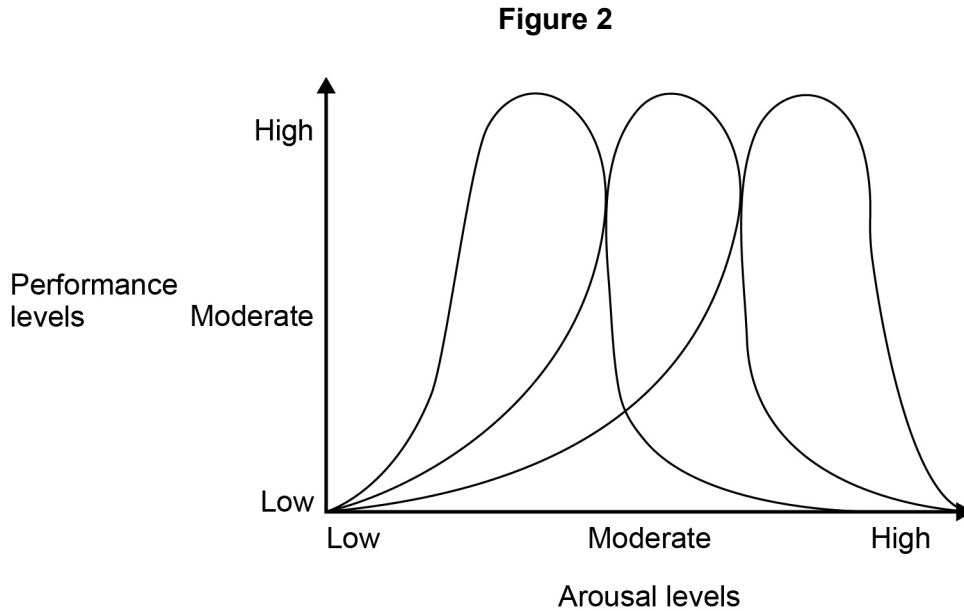
Outline how the interactionist perspective of personality explains the differing behaviour of individual players.

[4 marks]

Question 8

To maximise the chance of success an elite performer must reach their optimum level of arousal.

Figure 2 shows the inverted U theory illustrating different levels of arousal.



1 3

Describe how the nature of a task may affect the optimum level of arousal **and** outline the possible impact of under-arousal on performance.

[4 marks]

Performers who are over-aroused may use various stress management techniques to control their anxiety and improve their performance.

1 4

Describe how the technique of imagery can be used by the performer.

[3 marks]

Turn over for the next section

Turn over ►

Section C: Evaluating Contemporary Influences

Answer **three** questions.

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

Question 9

World Games, such as the 2016 Rio Olympics, include a number of sports that were developed in the nineteenth century.

1	5
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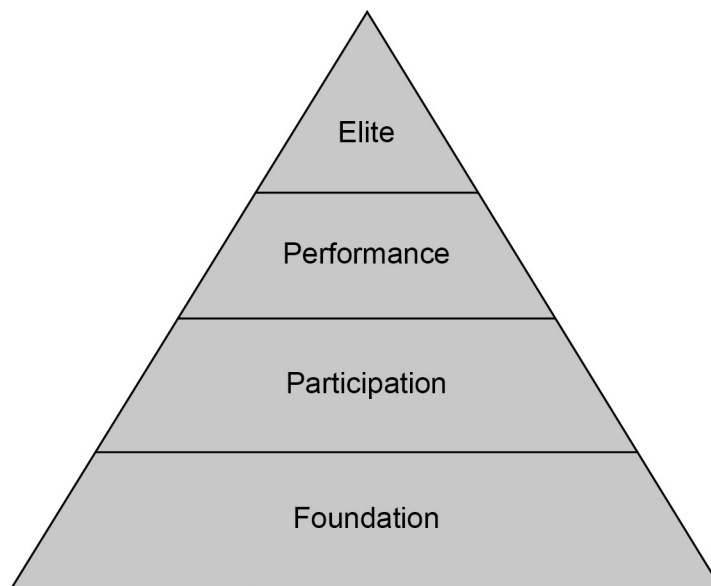
Outline **and** explain the influence of social factors in the nineteenth century on the development of rational sport.

[14 marks]

Question 10

Figure 3 shows a model of Sport England's Sport Development Continuum.

Figure 3



1	6
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Explain why it is important to have a wide base for the Sport Development Continuum.

[2 marks]

1	7
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Describe the support available within sporting organisations that allows talented individuals to become elite performers.

[5 marks]

Question 11

Although amateur athletes do not receive payment directly from competing in their sport, there are opportunities for them to receive financial support from organisations such as the National Lottery.

1	8
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State **three** other ways in which amateur athletes can be financially supported.

[3 marks]

1	9
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Outline the advantages **and** disadvantages of lottery funding of elite sport in the UK.

[4 marks]

Question 12

The media has influenced the nature and extent of mass spectator sport since the nineteenth century.

2	0
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Explain the advantages of media coverage to a sport **and** the disadvantages it can have for an elite performer.

[7 marks]

END OF QUESTIONS

There are no questions printed on this page

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