

Centre Number						Candidate Number				
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Other Names										
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For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
TOTAL	



General Certificate of Education  
Advanced Subsidiary Examination  
January 2012

# Physical Education

# PHED1

## Unit 1 Opportunities for and the Effects of Leading a Healthy and Active Lifestyle

Thursday 19 January 2012 1.30 pm to 3.30 pm

You will need no other materials.

### Time allowed

- 2 hours

### 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 outside the box around each page or 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 part questions are shown in brackets.
- The maximum mark for this paper is 84.
- In **Section B**, you should answer in continuous prose.
- In **Section B**, you will be marked on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.



J A N 1 2 P H E D 1 0 1

**Section A**

Answer **all** questions in the spaces provided.

There are 12 marks for each question.

**Applied Exercise Physiology**

**1** Football is a popular team sport played in the UK. Football players require a good level of stamina if they are to be successful.

**1 (a) (i)** What do you understand by the term 'stamina' **and** why is it an important component of fitness for football players?

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*(2 marks)*

**1 (a) (ii)** Name **two** other components of fitness **and**, using examples, explain why each component is important in a game of football.

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*(3 marks)*



**1 (b)** During a game of football, a player's heart rate will vary.

Explain how changes in the acidity of the blood cause the heart rate to increase during a game of football.

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(4 marks)

**1 (c)** Years of training will eventually result in football players having a lowered resting heart rate.

**1 (c) (i)** What term is used to describe a resting heart rate that is below 60 beats per minute?

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(1 mark)

**1 (c) (ii)** How does a lower resting heart rate affect oxygen delivery to muscles?

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(2 marks)

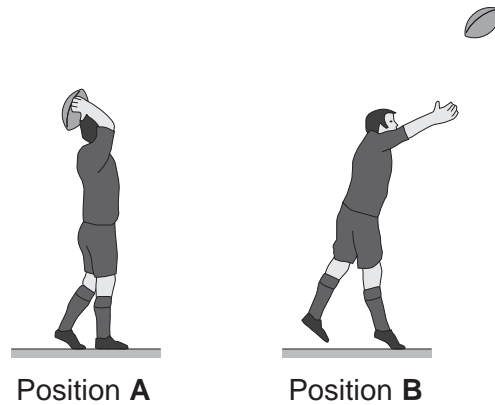
12

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2 **Figure 1** shows the movements involved as a player throws the ball on to the field of play during a game of rugby.

**Figure 1**



2 (a) (i) Complete **Table 1** to identify the 'main agonist', the 'type of muscle contraction' and the 'joint action' at the **elbow joint** during the movement from Position **A** to Position **B**.

**Table 1**

Main agonist	
Type of muscle contraction	
Joint action	

(3 marks)

2 (a) (ii) Using **Figure 1**, name, sketch and label the lever system operating at the elbow during the movement from Position **A** to Position **B**.

Name of lever system: .....

(3 marks)



**2 (b)** During a game, the blood pressure of a player increases.

What factors determine the 'blood pressure' in arteries?

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(3 marks)

**2 (c)** During a game, a player's arterio-venous oxygen difference (a-vO<sub>2</sub> diff) will increase.

What is the significance of this increase in a-vO<sub>2</sub> diff to the player?

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(3 marks)

**Turn over for the next question**

12

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**Skill Acquisition**

**3** **Figure 2** shows swimmers waiting for the official to start the race.

**Figure 2**



**3 (a) (i)** The swimming start can be classified on continua as ‘open – closed’, ‘self paced – externally paced’ and ‘discrete – serial – continuous’.

Classify the swimming start using these **three** continua.

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 (1 mark)

**3 (a) (ii)** Justify how **two** of these continua may change during the race.

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 (2 marks)



**3 (b)** The swimming start is a skill that requires certain abilities to be performed well.

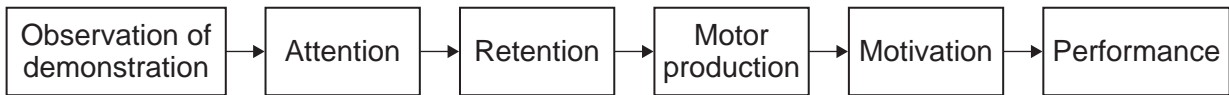
Using examples from a swimming start, explain the **differences** between 'motor ability' and 'perceptual ability'.

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(3 marks)

**3 (c)** Performers could learn the swimming start by observational learning. 'Bandura's observational model of learning' is shown in **Figure 3**.

**Figure 3**



Using **Figure 3**, explain how attention, motor production and motivation are used to help the process of learning a skill.

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(3 marks)

Turn over ►



**3 (d)** Suggest how a coach might help a performer to retain newly learned skills.

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(3 marks)

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**4** Tennis players need to develop their skills so that they can become more effective.

**4 (a)** As a tennis player moves from the early 'stage of learning' through to the final stage of learning, the type of feedback they use will change.

**4 (a) (i)** Name the early and the final stages of learning, **and** describe the characteristics of each.

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*(3 marks)*

**4 (a) (ii)** Describe how the 'feedback' that a tennis player uses will change between these two stages of learning.

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*(3 marks)*

**Question 4 continues on the next page**

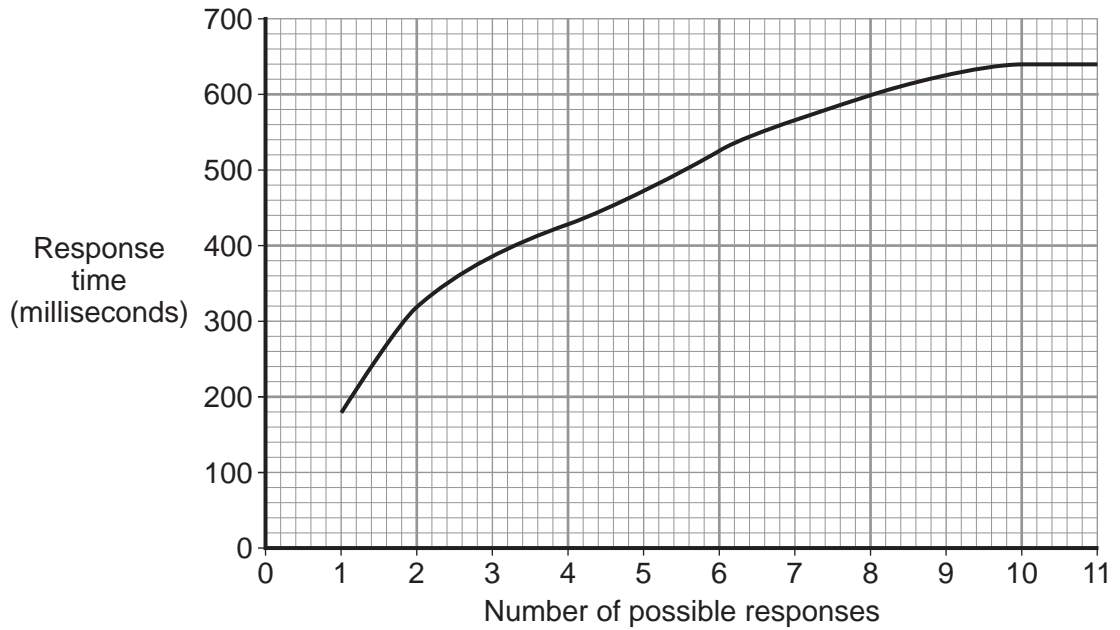
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**4 (b)** During a tennis rally, a player will have to react and respond quickly to their opponent's shots.

**Figure 4** shows the relationship between the number of possible responses and the time taken to respond.

**Figure 4**



**4 (b) (i)** Using examples from tennis, explain how the relationship shown in **Figure 4** will affect the time it takes for a player to respond to an opponent's shot.

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(3 marks)



**4 (b) (ii)** Use the 'single channel hypothesis' to explain why there is a delayed response by a player in tennis when their opponent's shot hits the top of the net and changes direction.

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(3 marks)

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**Turn over for the next question**

**Turn over ►**

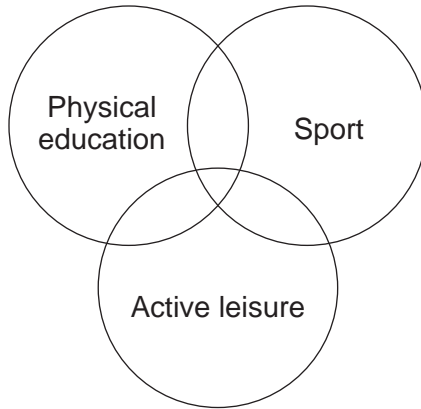


**Opportunities for Participation**

5 Physical education, active leisure and sport are important characteristics of British society.

5 (a) **Figure 5** shows the relationship between the concepts of physical education, active leisure and sport.

**Figure 5**



Outline the main **differences** between 'physical education' and 'active leisure'.

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(4 marks)



**5 (b)**

The provision of physical activity in UK schools has changed over time.

What were the characteristics of physical education in state schools in the post-World War II period before the introduction of the National Curriculum?

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(4 marks)

**5 (c)**

Modern day state schools have expanded their physical education curriculum to include 'outdoor and adventurous activities'.

What are the benefits that young people may gain as a result of experiencing activities such as rock climbing and canoeing?

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(4 marks)

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Turn over ►



6 There are a wide variety of opportunities to take part in sport in the UK.

6 (a) What are the characteristics of 'sport'?

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(3 marks)

6 (b) Many people take part in sport to improve their health and fitness.

Apart from improved health and fitness, how might taking part in sport benefit an individual?

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(3 marks)

6 (c) During the past ten years there has been an increase in membership of 'private' fitness clubs.

What are the **advantages** of being a member of a private fitness club?

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(2 marks)



**6 (d)**

'National governing bodies' (NGBs) try to provide 'equal opportunity' through advertising campaigns and by improving access to facilities.

Suggest other solutions that NGBs could use to overcome discrimination and to increase participation in physical activity.

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(4 marks)

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**Turn over for Section B**

**Turn over ►**



**Section B**

Answer this question. There are 12 marks for this question.

This question should be answered in continuous prose.

In order to maximise your marks you are advised to give equal weighting to all areas of the question.

**7** You have been asked to improve the fitness and skills of a group of AS level physical education students.

Describe how you would apply the 'FITT principles' **and** 'specificity' to improve fitness.

Explain how the characteristics of the learner **and** the situation may influence your decision to use 'command style' teaching to improve the skills of the group.

**You may use this space to plan your answer**

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(12 marks)

**END OF QUESTIONS**

<b>12</b>

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