

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
TOTAL	



General Certificate of Education  
Advanced Subsidiary Examination  
June 2015

# Physical Education

# PHED1

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

Friday 5 June 2015 1.30 pm to 3.30 pm

**For this paper you must have:**

- 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 U N 1 5 P H E D 1 0 1

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**PHED1**

**Section A**

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

There are 12 marks for each question.

**Applied Exercise Physiology**

**1** Tennis is a popular racket sport. Tennis players require high levels of power to be successful.

**1 (a) (i)** What do you understand by the term power? **[1 mark]**

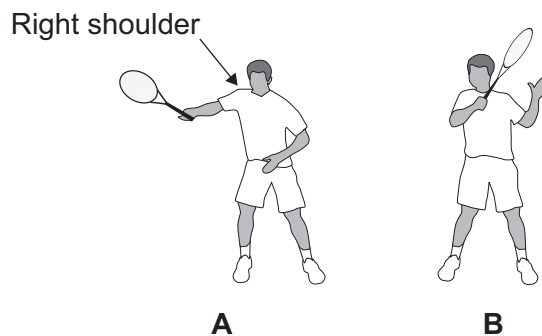
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**1 (a) (ii)** Explain the use of **one** named component of skill-related fitness required by a tennis player. **[1 mark]**

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**1 (b)** **Figure 1** shows a tennis player performing a forehand stroke.

**Figure 1**



1 (b) (i) Using **Figure 1**, complete **Table 1** to identify the articulating bones, the joint action and the main agonist at the right **shoulder** from position **A** to position **B**.

[3 marks]

**Table 1**

Right shoulder movement from position A to position B		
Articulating bones	Joint action	Main agonist

1 (b) (ii) Identify the plane **and** the axis about which the movement at the right **shoulder** is taking place from position **A** to position **B**.

[2 marks]

Plane: .....

Axis: .....

1 (c) Tennis players must plan their diet to optimise their performance.

Discuss whether a tennis player should have a diet rich in fat.

[5 marks]

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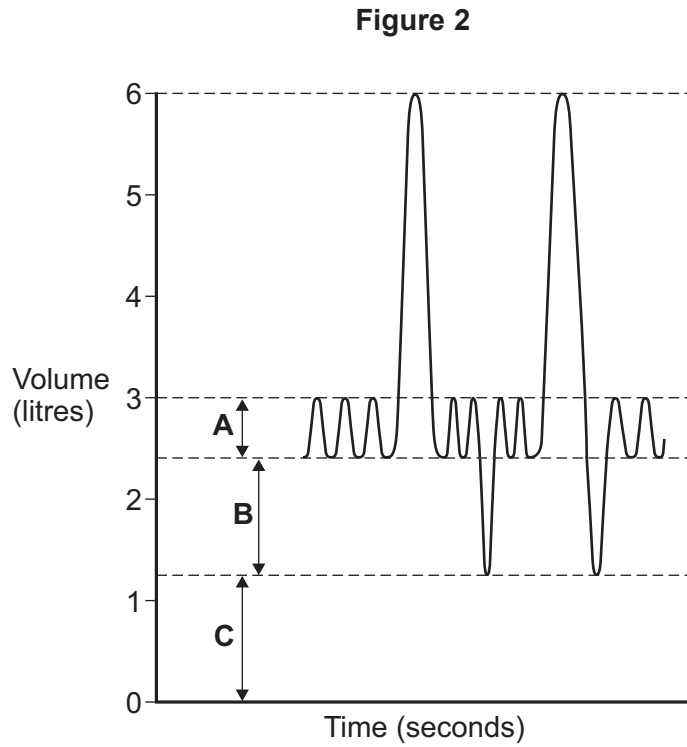
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2 Many athletes will use continuous training to maintain a good level of fitness. **Figure 2** shows a spirometer trace of an athlete at rest.



2 (a) (i) Complete **Table 2** to identify the type of lung volumes **A**, **B** and **C** shown in **Figure 2**.

[3 marks]

**Table 2**

Lung Volume	
<b>A</b>	
<b>B</b>	
<b>C</b>	



**2 (a) (ii)** What effect does a continuous exercise session have on lung volumes **B** and **C** in **Figure 2**? **[2 marks]**

Volume **B**: .....

Volume **C**: .....

**2 (b)** The transport of oxygen during a continuous training session is vital for athletes to make sure that oxygen supply meets oxygen demand.

What is the difference between haemoglobin **and** myoglobin when transporting oxygen?

**[2 marks]**

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**2 (c)** If an athlete performs a continuous exercise session lasting 45 minutes at a sub-maximal pace, cardiovascular drift will occur.

Explain the term cardiovascular drift.

**[3 marks]**

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**Question 2 continues on the next page**

**Turn over ►**



**2 (d)**

Cardiac hypertrophy and bradycardia are two long-term effects of continuous training on the heart.

What are the effects of cardiac hypertrophy and bradycardia on the heart during exercise?

**[2 marks]**

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**Skill Acquisition**

**3** **Figure 3** shows an incomplete information processing model.

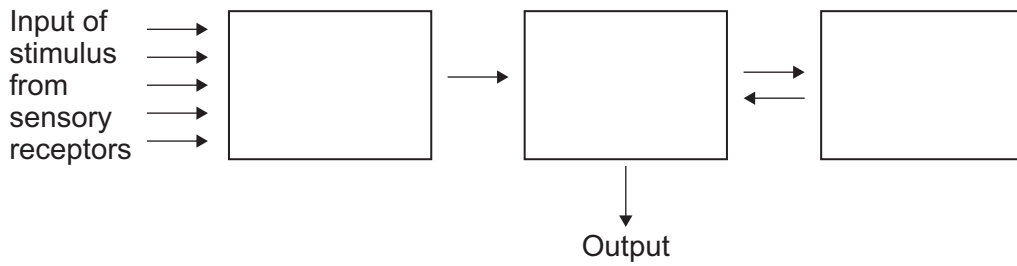
The three key terms missing from the model are:

- long-term memory (LTM)
- short-term memory (STM)
- short-term sensory store (STSS).

**3 (a)** Complete **Figure 3** by writing the correct key term in each of the boxes.

**[1 mark]**

**Figure 3**



**3 (b)** Outline the characteristics and the functions of the short-term memory.

**[3 marks]**

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**3 (c)** In order to improve performance, an athlete needs to be able to store and retrieve important information.

How can a coach ensure that strategies and tactics are stored in the long-term memory?

**[4 marks]**

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**3 (d)** Reaction time is important in effective decision making for many sport performers.

Explain the factors that affect reaction time.

**[4 marks]**

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**4 (a)** What is the difference between ability and skill? **[2 marks]**

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**4 (b)** Skills can be classified on the following continua:

- open – closed
- self-paced – externally paced
- discrete – serial – continuous.

Classify the badminton serve using these three continua. Justify your answers.

**[3 marks]**

Open – closed: .....  
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Self-paced – externally-paced: .....  
.....

Discrete – serial – continuous: .....  
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**4 (c)** Coaches may consider transfer of learning when coaching new skills.

Apart from positive transfer, explain **three** other forms of transfer of learning that may occur.

**[3 marks]**

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**Question 4 continues on the next page**

**Turn over ▶**



**4 (d)** Using Bandura's observational learning theory, explain how a coach could make demonstrations more effective.

**[4 marks]**

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**Opportunities for Participation**

**5** Figure 4 shows an indoor climbing wall with individuals engaging in active leisure.

**Figure 4**



**5 (a)** Active leisure involves physical activity during an individual's free time.

What are the benefits of active leisure to the **individual**?

**[3 marks]**

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**5 (b)** When using indoor climbing walls, individuals can experience perceived risk.

Explain how individuals can experience perceived risk when using an indoor climbing wall.

**[2 marks]**

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**Question 5 continues on the next page**

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**5 (c)** Opportunities for rock climbing are provided by the public, private and voluntary sectors.

What are the advantages of private sector provision for the individual?

**[2 marks]**

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**5 (d) (i)** What initiatives have Sport England introduced to increase opportunities for participation?

**[2 marks]**

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**5 (d) (ii)** Why have the opportunities for participation in activities such as climbing increased for people with disabilities?

**[3 marks]**

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**6** The 1988 Education Reform Act led to the introduction of the National Curriculum for Physical Education.

**6 (a)** Outline the main aims of the National Curriculum for Physical Education. **[4 marks]**

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**6 (b)** How did 19th century English public schools improve opportunities for students to participate in games? **[3 marks]**

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**Question 6 continues on the next page**

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**6 (c)** There is a lower rate of participation in certain sporting activities by ethnic minorities in the UK.

Discuss the suggestion that solutions to overcome discrimination in sport for ethnic minority groups have increased participation.

**[5 marks]**

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**Section B**

Answer this question.

There are 12 marks for this question.

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 deliver a weight training programme using visual guidance.

Outline the principles of weight training **and** identify the advantages of using visual guidance when introducing weight training exercises.

**[12 marks]**

You may use this space to plan your answer.

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ANSWER IN THE SPACES PROVIDED**

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Figure 4 – © NBC Universal/Getty

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