

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  
June 2010

# Physical Education

# PHED1

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

Friday 28 May 2010 9.00 am to 11.00 am

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 that 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 will be marked on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

PHED1



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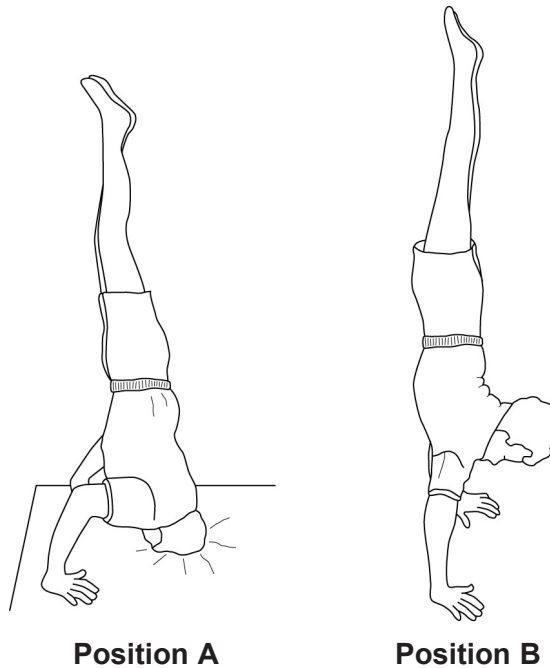
**Section A**

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

There are 12 marks for each question.

- 1 **Figure 1** shows how a gymnast pushes up from a headstand to a handstand.

**Figure 1**



- 1 (a) (i) Name the main 'agonist' at the elbow joint in the movement from position **A** to position **B**.

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(1 mark)

- 1 (a) (ii) Name the 'type of muscle contraction' taking place while the gymnast is stationary at position **A** **and** through the movement phase to position **B**.

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(2 marks)



1 (a) (iii) Name, sketch and label the lever system that is operating at the elbow during the movement from **A** to **B**.

Lever system: .....

(3 marks)

1 (b) When a gymnast is performing, the physical demands of exercise will cause changes to the gymnast's cardiac output and stroke volume.

1 (b) (i) What are the effects of training on resting 'cardiac output' and 'stroke volume'?

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(2 marks)

1 (b) (ii) Explain how rising levels of carbon dioxide cause an increase in cardiac output.

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(4 marks)

Turn over for the next question

Turn over ►



**2** For effective performance, games players require oxygen to be delivered to the muscles and carbon dioxide to be removed.

**2 (a) (i)** State **two** ways in which carbon dioxide is transported by the blood.

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*(2 marks)*

**2 (a) (ii)** Explain how oxygen is taken up by haemoglobin from the lungs and released at the muscle site.

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*(3 marks)*

**2 (b)** Explain why aerobic training improves the performer's ability to transport oxygen.

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*(2 marks)*

**2 (c)** Explain how a diet containing sufficient 'vitamins' **and** 'minerals' contributes to effective performance.

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*(2 marks)*



**2 (d)** Explain the mechanics of breathing which allow a performer to fill the lungs with air during exercise.

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(3 marks)

**3** When learning a skill such as triple jumping, performers will use their abilities to improve their level of skill.

**3 (a)** Briefly explain the terms 'ability' **and** 'skill'.

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(2 marks)

**3 (b)** The skill of triple jumping can be classified according to various skill continua. Classify the triple jump according to the following continua, justifying each of your choices:

- open to closed
- self-paced to externally paced
- discrete to continuous.

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(3 marks)

**Question 3 continues on the next page**

**Turn over ►**

12



**3 (c)** Name the **four** stages of Bandura’s observational model of learning. Using examples, explain how a coach may use this model to teach the correct technique for skills such as triple jumping.

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(4 marks)

**3 (d)** What **other** factors should a coach consider for a demonstration to be effective?

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(3 marks)

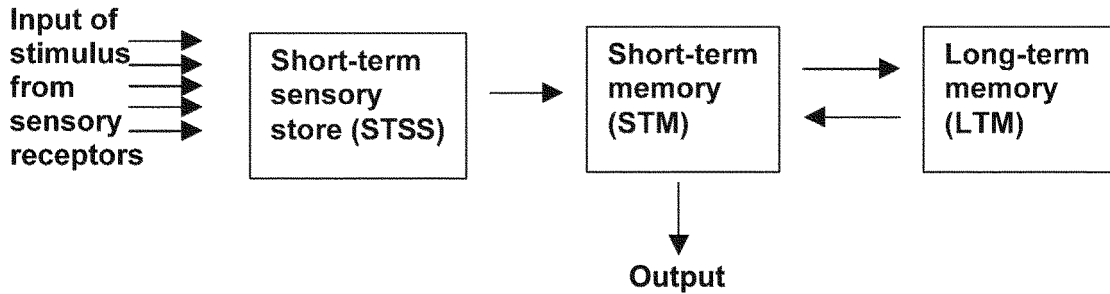
12



4 For effective performance, games players require the ability to receive, interpret and use information.

Figure 2 shows the relationships between the memory stores in a simple information processing model.

Figure 2



4 (a) (i) Selective attention is an important part of information processing. Using Figure 2, identify where 'selective attention' occurs and explain how it aids performance.

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(3 marks)

4 (a) (ii) How can a coach improve a player's selective attention?

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(3 marks)

Question 4 continues on the next page

Turn over ►



4 (b) (i) Performing a skill involves ‘movement time’, ‘response time’ and ‘reaction time’. What is the relationship between these three time phases?

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(1 mark)

4 (b) (ii) Identify the factors that could affect a games player’s response time.

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(5 marks)

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5 Figure 3 shows an indoor ski slope.

Figure 3



Getty Images/Three Lions

5 (a) Indoor ski slopes are an example of an urban adaptation of an outdoor and adventurous activity.

Give **two** other examples of outdoor and adventurous activities **and** state how **one** of these could be adapted within an urban environment.

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(2 marks)

5 (b) Participation in outdoor and adventurous activities in the natural environment involves an element of risk. What is the difference between 'real risk' and 'perceived risk'?

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(3 marks)

Question 5 continues on the next page

Turn over ►



**5 (c)** The Sport England Active People Survey of 2006 showed that approximately 9% of people with a disability participate regularly in sport compared with 23% of the rest of the population.

**5 (c) (i)** Suggest reasons for this lower participation rate for people with a disability.

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(4 marks)

**5 (c) (ii)** Opportunities for people with disabilities to participate in 'competitive sport' have increased in recent years. Give reasons for this increased opportunity.

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(3 marks)

12



**6** There are many influences which impact on an individual's participation in sporting and recreational activities.

**6 (a)** Name **three** 'policies' that Sport England has developed to encourage increased participation in sport.

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*(3 marks)*

**6 (b)** Why has the government in the United Kingdom (UK) become increasingly involved in developing specific policies to encourage participation in sport?

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*(4 marks)*

**Question 6 continues on the next page**

**Turn over ►**



**6 (c)** Explain how school provision can influence future participation in physical activities.

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(5 marks)

12





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Dotted lines for writing.

(12 marks)

END OF QUESTIONS

12



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ANSWER IN THE SPACES PROVIDED**

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