

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 2012

Physical Education

PHED1

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

Thursday 31 May 2012 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 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 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 Many people play tennis as a way of improving their fitness.

1 (a) (i) Explain the difference between the terms health and fitness.

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(1 mark)

1 (a) (ii) Explain how the health of a performer may affect their fitness.

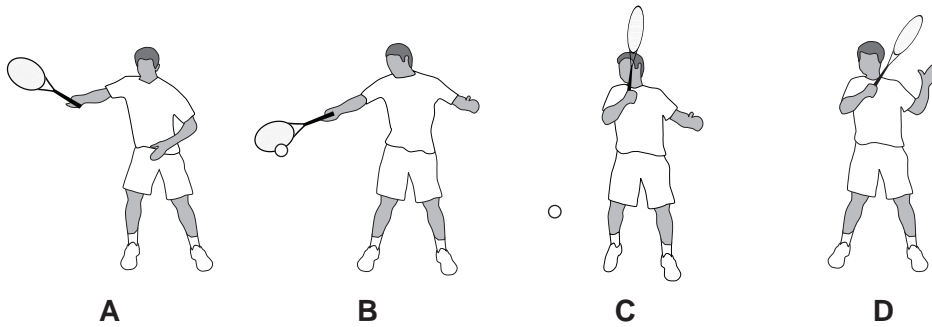
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(2 marks)



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

Figure 1



Using Figure 1, complete Table 1 to identify the main agonist and the joint action that occurs at the joints during the forehand stroke.

Table 1

Movement description	Main agonist	Joint action
Shoulder joint from A to C		
Elbow joint from B to D		

(4 marks)

1 (c) During a game of tennis, a player's breathing rate may vary.

Explain how increases in levels of carbon dioxide and acidity in the blood cause breathing rate to rise.

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(3 marks)

Turn over ►



1 (d) Breathing rate increases to get more oxygen into the blood. Gaseous exchange involves oxygen diffusing across membranes.

Identify the membranes involved in this diffusion **and** identify **one** characteristic of these membranes that allows diffusion to happen.

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(2 marks)

2 The different types of events in athletics require different components of fitness.

2 (a) (i) Name **two** components of skill-related fitness required by a 400 metre hurdler.

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(1 mark)

2 (a) (ii) Name **two** components of health-related fitness required by a shot putter.

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(1 mark)

2 (b) As the 400 metre hurdler's blood flows around his body, its pressure and velocity changes, as shown in **Table 2**.

Table 2

	Pressure	Velocity
Blood vessels A	High	High
Blood vessels B	Low	Low
Blood vessels C	Low	Medium

2 (b) (i) Which of the blood vessels in **Table 2**, **A**, **B** or **C**, represents veins?

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(1 mark)



2 (b) (ii) State **three** characteristics or functions of arteries.

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(3 marks)

2 (c) (i) Where is myoglobin found in the body **and** what is its role during exercise?

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(2 marks)

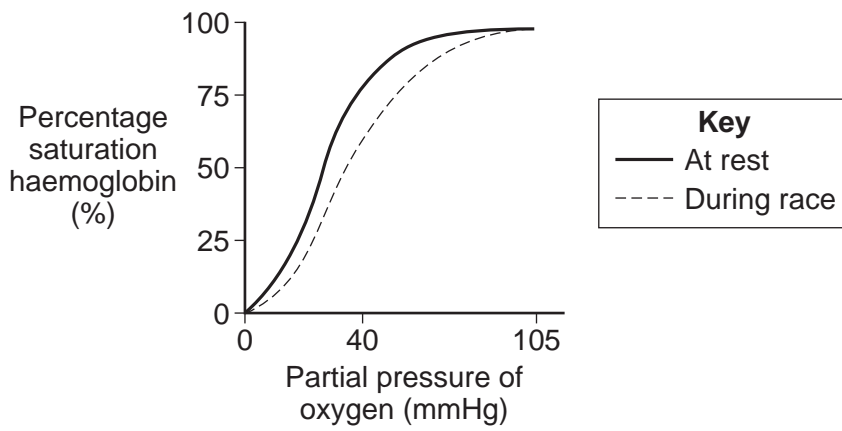
Question 2 continues on the next page

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2 (c) (ii) Figure 2 shows the oxyhaemoglobin dissociation curve.

Figure 2



During a 400 metre hurdles race, the curve shifts to the right.

Explain the causes of this change to the curve **and** the effect that this change has on oxygen delivery to the muscles.

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(4 marks)

12



Skill Acquisition

3 Players in a team game will use their skills to play effectively.

3 (a) Explain how players use their short-term memory to perform skills during a team game.

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(3 marks)

3 (b) Using examples, explain why different skills in a team game could be classified as:
open skills

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closed skills

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(2 marks)

3 (c) In team games, players often need to move into position quickly.

3 (c) (i) Explain the difference between the terms movement time and reaction time.

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(2 marks)

Question 3 continues on the next page

Turn over ►



3 (c) (ii) Choice reaction time is far more common in team games than simple reaction time.
Explain this statement.

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(2 marks)

3 (c) (iii) What can games players do to improve their response time?

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(3 marks)

4 (a) What are the characteristics of a skilled performance?

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(3 marks)

12



4 (b) Coaches will encourage performers to practise skills so that the skills can transfer to the competitive situation.

Describe what is meant by the term transfer of learning **and** explain **two** different forms that transfer can take.

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(3 marks)

4 (c) (i) When teaching new skills, coaches often implement the principles of Schmidt's Schema Theory.

Explain the functions of recognition schema.

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(4 marks)

4 (c) (ii) What implications does Schmidt's Schema Theory have for the way in which sports skills should be taught?

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(2 marks)

12

Turn over ►



Opportunities for Participation

5 Recreation, play and sport are important features of British society.

5 (a) What are the similarities **and** the differences between recreation and play?

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(4 marks)

5 (b) Provision for recreation may be through the voluntary sector, public sector or private sector.

5 (b) (i) What are the characteristics of public sector provision?

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(3 marks)



5 (b) (ii) The government introduced the 'best value' policy in an attempt to improve recreational and sport provision.

Outline the main features of the 'best value' policy.

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(2 marks)

5 (c) How could public sector provision encourage increased participation for those in lower socio-economic groups?

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(3 marks)

12

Turn over for the next question

Turn over ►



6 Sport has remained a major recreational activity in the UK since the 19th century.

6 (a) The majority of sports were rationalised in the 19th century.

6 (a) (i) What is meant by the term rational recreation?

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(3 marks)

6 (a) (ii) Why were the majority of sports rationalised in the 19th century?

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(3 marks)



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 work with a group of AS level physical education students to improve their fitness and skill levels.

Describe the different types of stretching that can be used **and** how to complete them safely.

Explain the factors that need to be considered before deciding whether it would be an advantage to teach a skill by whole practice.

You may use this space to plan your answer.

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(12 marks)

END OF QUESTIONS

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12



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