



Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

AS

PHYSICAL EDUCATION

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

Tuesday 24 May 2016

Morning

Time allowed: 2 hours

Materials

You will need no other materials.

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 6 P H E D 1 0 1

PB/Jun16/E2

PHED1

Section A

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

There are 12 marks for each question.

Applied Exercise Physiology

1 (a) (i) Body Mass Index (BMI) can be used as a measure of nutritional suitability.

Which **one** of the following statements is correct?

[1 mark]

(Tick the correct box.)

A BMI measures body composition

B BMI measures body fat

C BMI measures bone density

D BMI measures muscle mass

1 (a) (ii) A high percentage of body fat can have a negative impact on health and fitness.

Define the terms health **and** fitness.

[2 marks]



1 (a) (iii) Other than diet, explain how **two** different lifestyle choices can have a negative impact on health.

[2 marks]

1 (b) Gaseous exchange occurs between the capillaries and tissues and the capillaries and alveoli.

Outline how the following characteristics of capillaries allow for efficient gaseous exchange:

- one cell thick
- large surface area
- narrow diameter.

[3 marks]

One cell thick: _____

Large surface area: _____

Narrow diameter: _____

Question 1 continues on next page

Turn over ►



- 1 (c) **Table 1** shows the partial pressure of oxygen (PO_2) and carbon dioxide (PCO_2) in a blood capillary and a muscle.

Table 1

	PO_2 (mmHg)	PCO_2 (mmHg)
Blood capillary	100	40
Muscle	40	46

Using **Table 1**, describe how oxygen **and** carbon dioxide move between the blood and the muscles.

[4 marks]



Turn over for the next question

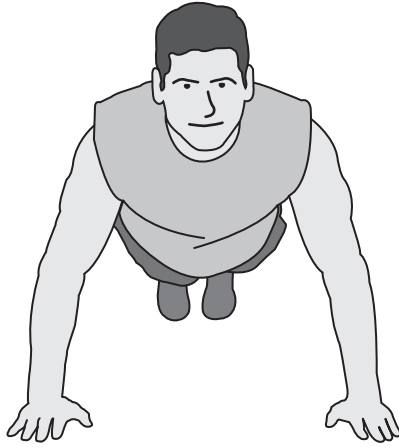
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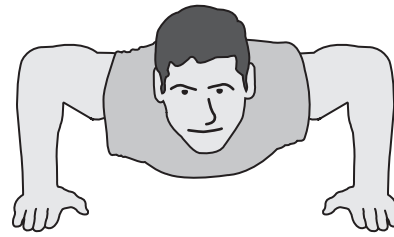


2 **Figure 1** shows a performer completing a press up.

Figure 1



Position A



Position B

2 (a) Using **Figure 1**, complete **Table 2** to identify the joint action, the main agonist and type of isotonic contraction at the **elbow** from position **A** to position **B**.

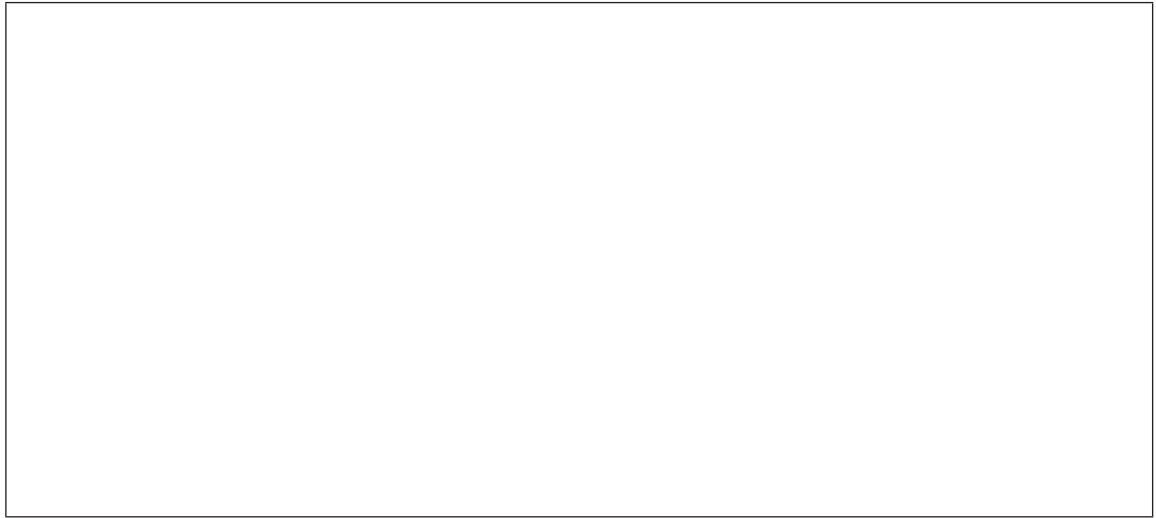
[3 marks]

Table 2

Elbow movement from position A to position B		
Joint action	Main agonist	Type of isotonic contraction



- 2 (b)** Lever systems allow movement at joints. Sketch and label a third class lever system. **[2 marks]**



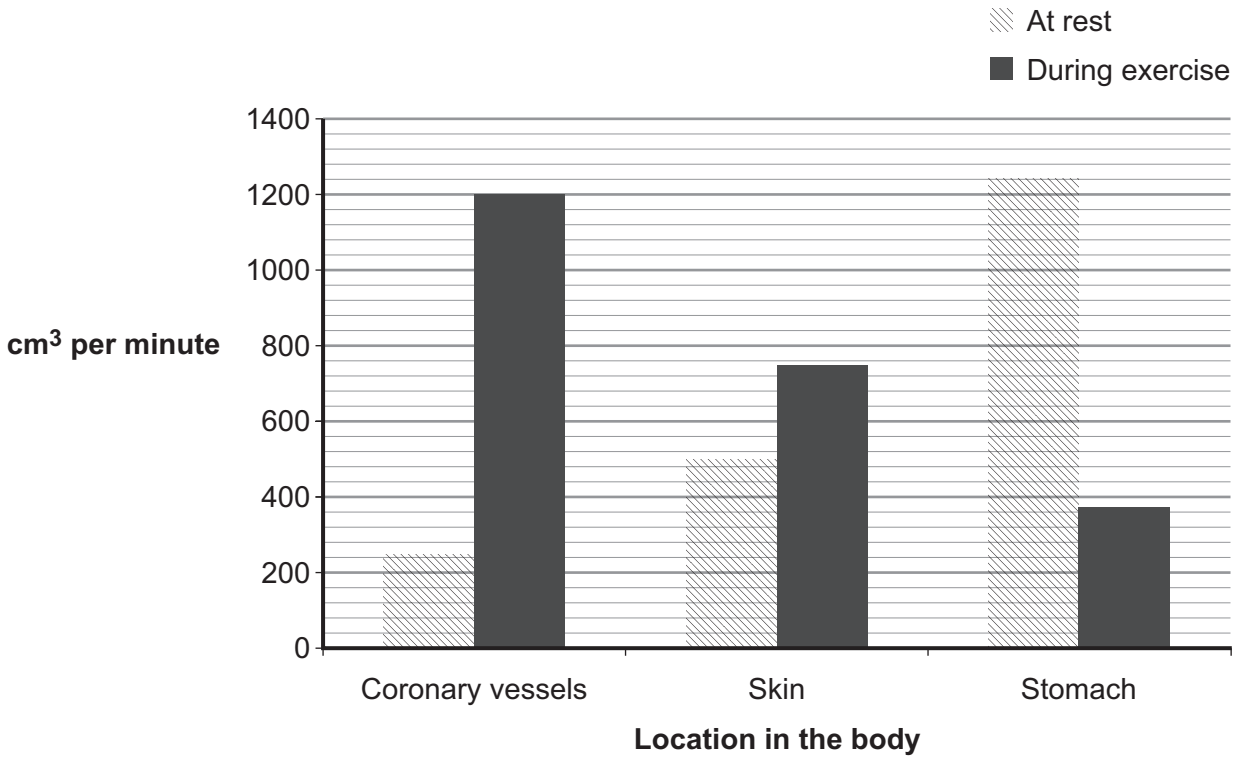
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2 (c) When a performer exercises for a continuous period, blood is redistributed around the body as shown in **Figure 2**.

Figure 2



2 (c) (i) Identify and explain the change in blood flow during exercise at **two** different locations shown in **Figure 2**.

[4 marks]



2 (c) (ii) Explain how redistribution of blood is achieved during exercise.

[3 marks]

12

Skill Acquisition

3 Skills are classified using different continua.

3 (a) (i) A tennis player starts the rally with a serve.

Which **one** of the following options accurately classifies the tennis serve?

[1 mark]

(Tick the correct box.)

A self-paced – discrete – gross

B externally paced – continuous – fine

C externally paced – discrete – gross

D self-paced – serial – fine

3 (a) (ii) Justify your classification on the gross – fine continuum.

[1 mark]

Turn over ►



3 (b) (i) The memory process is important to a tennis player.

Describe the functions of a tennis player's short term sensory store (STSS) during a rally.

[3 marks]

3 (b) (ii) Define simple reaction time **and** choice reaction time, **and** explain which is more common in the game of tennis.

[4 marks]



3 (c) Motivation is important for tennis players.

Name and describe different forms of motivation.

[3 marks]

12

4 There are three stages of learning.

4 (a) Identify the first stage of learning **and** justify the use of demonstrations at this stage.

[2 marks]

4 (b) (i) When a performer moves from the first stage of learning to the final stage of learning, they may experience a learning plateau.

Identify the possible causes of a learning plateau.

[3 marks]

Turn over ►



4 (b) (ii) Suggest strategies a coach may use to help a performer to overcome a learning plateau.

[4 marks]

4 (c) Schmidt's (1975) schema theory states that learning occurs through the development of schema.

Recall schema is responsible for initiating movement.

Identify and explain the elements of recall schema.

[3 marks]

12



Opportunities for Participation

5 Sport England aims to increase the number of people who regularly participate in sport and physical activity.

5 (a) Identify the characteristics of sport. **[3 marks]**

5 (b) Sportivate is a London 2012 legacy project. Its aim is to increase participation in sport. Describe the features of a Sportivate project. **[2 marks]**

5 (c) Sport England research shows that women are less likely to take part in sport than men. Explain how the following act as barriers resulting in lower participation rates amongst women:

- stereotyping
- discrimination.

[2 marks]

Stereotyping _____

Discrimination _____

Turn over ►



5 (d) Suggest how schools can improve participation rates of girls.

[5 marks]

12

6 Participation in sport and physical activity can depend upon the opportunities available to individuals within society.

6 (a) Define the term equal opportunity.

[2 marks]



6 (b) (i) Opportunities to participate in sport and physical activity are provided by the voluntary sector, public sector or private sector.

Identify the characteristics and goals of the voluntary sector.

[3 marks]

6 (b) (ii) Suggest how the public sector supports participation in sport and physical activity for those from a lower socio-economic class.

[2 marks]

Question 6 continues on the next page

Turn over ►



- 6 (c)** The publication *Moving and Growing* (1952) encouraged a movement approach in school physical education programmes.

Describe the content **and** delivery of the movement approach in school physical education programmes.

[5 marks]

12



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 plan and deliver a six week training programme for a group of performers, and provide extrinsic feedback.

Explain how the FITT principles can be applied to the training programme **and** outline the advantages and disadvantages of using extrinsic feedback.

[12 marks]

You may use this space to plan your answer.

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