

**ADVANCED SUBSIDIARY GCE  
PHYSICAL EDUCATION**  
An Introduction to Physical Education

**G451**

**Friday 20 May 2011  
Morning**

**Duration: 2 hours**

Candidates answer on the question paper.

**OCR supplied materials:**

None

**Other materials required:**

None



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**INSTRUCTIONS TO CANDIDATES**

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** parts of the question in each of Sections A, B and C.
- Do **not** write in the bar codes.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **90**.
- The quality of your written communication will be assessed in questions that are indicated accordingly (\*).
- This document consists of **16** pages. Any blank pages are indicated.

**Section A**

Answer **all** parts of the question.

**Anatomy and Physiology**

1 (a) The volume of blood pumped around the body by the heart varies according to the intensity of exercise performed.

(i) Define stroke volume and give a resting value for the average adult.

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..... [2]

(ii) Describe the changes that take place to stroke volume from rest to maximal exercise levels.

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(b) One reason for performing a cool down after exercise is to maintain blood pressure.

(i) Define blood pressure and identify a diastolic value for a person suffering from hypertension.

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(ii) Describe **three** other effects of an active cool down on the vascular system of the performer.

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(c) Explain how the body controls the increased distribution of blood to the working muscles during exercise.

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(d) During exercise the volume of air expired will increase compared to resting levels.

Describe the mechanics of expiration during exercise.

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**Section B**

Answer **all** parts of the question.

**Acquiring Movement Skills**

- 2 (a) Transfer of learning is widely recognised as having a strong influence on the learning and performance of movement skills.

Describe, using a practical example for each, what is meant by positive, negative, proactive and retroactive transfer.

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- (b) Using practical examples, describe the nature of a motor programme.

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