

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

**G451**

**Friday 28 May 2010**  
**Morning**

**Duration: 2 hours**

Candidates answer on the Question Paper

**OCR Supplied Materials:**  
 None

**Other Materials Required:**  
 None



<b>Candidate Forename</b>		<b>Candidate Surname</b>	
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<b>Centre Number</b>								<b>Candidate Number</b>					
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**INSTRUCTIONS TO CANDIDATES**

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- There are three Sections in this paper.
- Answer **all** parts of the question in each of Sections A, B and C.
- 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).
- 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) Fig. 1 shows a gymnast holding a position on the rings. Use your anatomical and physiological knowledge to complete the table below for the hip joint.



Fig. 1

Joint	Joint Type	Movement	Agonist	Antagonist
Hip				Gluteus Maximus

The gymnast in Fig. 1 must keep his shoulders in a fixed position. Name **two** muscles in the rotator cuff group which aid the stability of the shoulder joint.

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- (b) A performer's mix of fast and slow twitch muscle fibres is genetically determined.

How might the mix of muscle fibre types determine the success of a performer?

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Identify **two** structural characteristics of muscle fibre types associated with athletes participating in endurance events.

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(c) Explain the effects of altitude on the respiratory system and how these effects impact on the performance of an endurance athlete performing at altitude.

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(d) Using an example from PE or Sport explain how changes in the position of a performer's centre of mass can affect performance.

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Section B

Answer all parts of the question.

Acquiring Movement Skills

- 2 (a) Describe gross motor abilities and psychomotor abilities and give a practical example for each.

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- (b) Explain open loop control and explain why it is often linked to the autonomous phase of learning and performing movement skills.

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Section C

Answer all parts of the question.

Socio-Cultural studies relating to participation in physical activity

- 3 (a) Fig. 2 shows the 'sports development pyramid'. Your position on the pyramid can be affected by opportunity, provision and esteem.



Fig. 2

- (i) Describe the **foundation**, **participation** and **performance** levels of the sports development pyramid.

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- (ii) Describe how **esteem** could affect a person's placement on the sports development pyramid.

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