



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

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PHYSICAL EDUCATION

9396/12

Paper 1

October/November 2010

2 hours 30 minutes

Additional Materials: Answer Booklet/Paper

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.



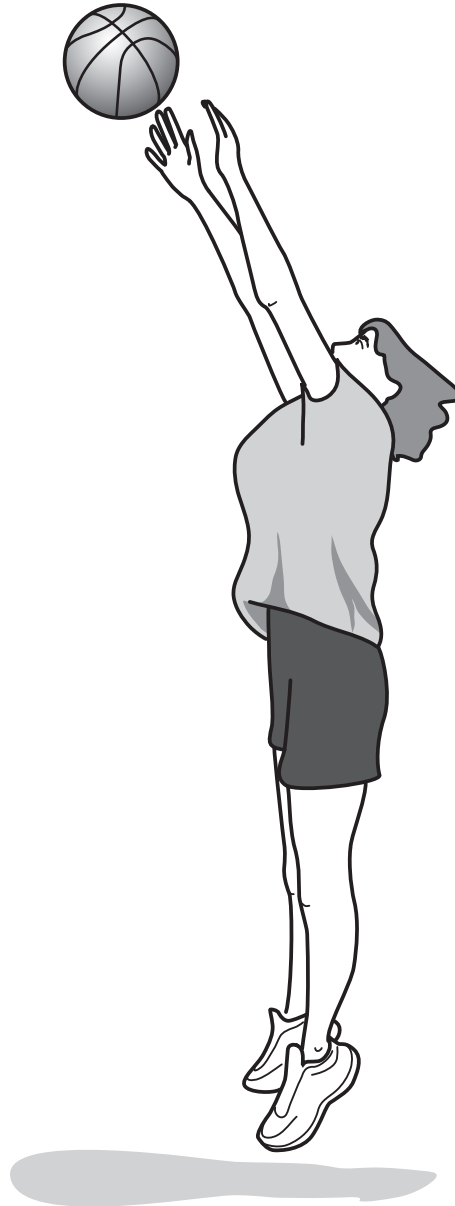
This document consists of **5** printed pages and **3** blank pages.



Answer **all** questions.

Section A: Applied Anatomy and Physiology

- 1 (a) (i) The ability to perform a vertical jump is useful in a number of sports e.g. jumping to block a ball in volleyball.



Complete a movement analysis of the upward phase of a vertical jump for both the hip and ankle joint. Your analysis should include the joint type, the movement occurring and the working muscle. [6]

- (ii) Explain the role of the quadriceps muscle group during the landing phase of a vertical jump. [4]

- (b) Describe the vascular shunt mechanism that redistributes cardiac output during exercise. How does the structure of the arterioles help this process?
- (c) Describe the changes in velocity of the blood as it travels through the systemic circulation during exercise. Why do these changes take place?
- (d) The medulla oblongata responds to information from receptors in the body to regulate the supply of oxygen to the tissues of the body.

As an athlete starts to exercise explain how the medulla oblongata increases heart rate in order to provide more oxygen to working muscles. [6]

- (e) Why does an athlete experience a drop in aerobic performance when exercising at altitude? [5]

[Total: 30]

Section B: Acquiring, Developing and Performing Movement Skills

- 2 (a) Describe what is meant by gross motor abilities and psychomotor abilities.
- (b) Identify and describe the **three phases** of learning motor skills. [6]
- (c) What are the characteristics of intrinsic and extrinsic methods of motivation? [4]
- (d) The level of arousal of a performer often influences the acquiring, developing and performing of movement skills.
- Using the Inverted U theory explain how the level of arousal can affect performance. [4]
- (e) Using examples from sport throughout your answer, explain how motor programmes are formed so that skills can be performed with little conscious control. [5]
- (f) Explain what is meant by closed loop control and give an example of it in the performance of a movement skill. [4]
- (g) Observational learning is one way of acquiring the motor skills necessary to participate in sport. Using examples from sport, explain the process of learning through observation. [5]

[Total: 30]

Section C: Contemporary Studies in Physical Education and Sport

- 3 (a) Jelfs in his book 'Towards a Concept of Leisure', suggested that leisure could be an economic product, a form of social control or a basis for self realisation.

Explain the concept of leisure as:

- (i) an economic product [2]
 - (ii) a form of social control [2]
 - (iii) a basis of self realisation [2]
- (b) (i) Describe the characteristics of sport. [4]
- (ii) Using examples from sport explain both functional (desirable) and dysfunctional (undesirable) components of sport. [4]
- (c) Sponsorship deals in sport should benefit both the sponsor and the performer.
Explain reasons why this is not always the case. [5]
- (d) Mass participation in sport and physical activity is often promoted by countries around the world.
Using a country of your choice as an example, explain how mass participation in sport and physical activity is promoted. [6]
- (e) Discuss reasons why fair play in sport may be under attack from both professional and commercial forces. [5]

[Total: 30]

