



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

PHYSICAL EDUCATION

9396/12

Paper 1

October/November 2012

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 **4** printed pages.



Answer **all** questions.

Section A: Applied Anatomy and Physiology

- 1 (a) (i) Identify **two** different types of joint located in the spine. What type of movement is possible at each of these joints? [4]
- (ii) Using examples from sport explain the role of the multifidus and transverse abdominus muscles. [4]
- (b) The contraction of the heart muscle is controlled to allow the efficient filling and emptying of the heart.
- Describe the conduction system of the heart and explain how it relates to the cardiac cycle. [6]
- (c) Cardiac output is dependent on venous return.
- Describe **three** mechanisms that help maintain venous return during exercise. [6]
- (d) The velocity of the blood changes as it flows through the systemic circulatory system.
- Describe the changes in blood velocity and explain why these changes occur. [4]
- (e) Describe the process of inspiration at rest. Explain the changes in the mechanics of breathing during exercise that lead to greater inspiration. [6]

[Total: 30]

Section B: Acquiring, Developing and Performing Movement Skills

- 2 (a) Explain using practical examples what is meant by externally and internally paced skills. [4]
- (b) Fig. 2.1 shows, that to learn a specific skill in sport, a performer progresses from motor abilities through fundamental motor skill to skill learning.

motor abilities → fundamental motor skill → skill learning

Fig. 2.1

Using one practical example, describe this progression in skill learning. [6]

- (c) Describe how the strengthening of an S-R (stimulus-response) bond can be achieved when learning a movement skill. [4]
- (d) Using an example from a sport specific skill, explain open loop control. [3]
- (e) Define each of the following:
- reaction time
 - movement time
 - response time

Why is it often important to shorten your reaction time when performing movement skills? [5]

- (f) Using practical examples explain how different types of feedback can be used effectively to improve performance of movement skills. [5]
- (g) Give examples of how you might apply schema theory when teaching or coaching a sport specific movement skill. [3]

[Total: 30]

Section C: Contemporary Studies in Physical Education and Sport

- 3 (a) Play, recreation and leisure are three concepts of physical activity.
- (i) Using an activity of your choice, explain **four** similarities between play and recreation. [4]
 - (ii) Using a leisure activity as an example, describe the benefits of leisure to an individual. [5]
- (b) How can a school Physical Education programme encourage participation in sporting activity? [4]
- (c) (i) Explain the term *excellence in sport*. [2]
- (ii) Using a country of your choice, describe the policy, provision and administration which is in place to ensure that excellence in sport is achieved. [6]
- (d) Describe the barriers which prevent women from taking part in physical activity. [3]
- (e) Explain the possible causes of violence by players on the field of play. [6]

[Total: 30]

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