



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

PHYSICAL EDUCATION

9396/12

Paper 1

October/November 2013

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) Identify the items 1–5 in the table below, to describe a movement analysis of the hip and ankle joints of the striking leg during a penalty kick, from Position **A** to the finishing Position **B**. Include the type of muscle contraction, the type of movement and the joint type.



position **A**



position **B**

	muscle contraction	movement	joint type
hip joint	1	2	3
ankle joint		4	5

[5]

- (b) Identify the muscle fibre type a marathon runner would predominantly use during a long-distance race. Explain how the structure and function make the fibres suitable for this activity. [4]

- (c) During exercise, the heart rate increases.

(i) Explain how neural and hormonal factors regulate the heart rate during and after exercise. [4]

(ii) Identify and explain the factors that affect the stroke volume of the heart during exercise. [2]

- (d) During a sporting contest, the muscles require an efficient supply of blood.

(i) Outline the function and processes of the pulmonary circulatory system. [4]

(ii) During an activity, such as a marathon, performers run at a sub-maximal level for most of the race.

Explain the changes in blood pressure that occur, within the heart, during sub-maximal exercise. [3]

- (e) When exercising, the respiratory system plays an important role in gaseous exchange.

(i) Describe the changes that occur to the mechanics of breathing during exercise. [3]

(ii) A structured endurance training programme causes long term physiological changes to occur.

Explain how the gaseous exchange process becomes more efficient. [5]

[Total: 30]

Section B: Acquiring, Developing and Performing Movement Skills

- 2 (a) Skilful performances are often:
- goal directed
 - follow a technical model
 - aesthetically pleasing.

Describe practical examples of the performance of movement skills to show what is meant by each of these characteristics. [3]

- (b) Bandura's Theory of observational learning includes the four elements: *attention*, *retention*, *motor reproduction* and *motivation*.

Explain each of these elements for learning a movement skill in sport. [4]

- (c) Motor skills can be classified as discrete, serial or continuous.

Using a practical example for each, describe these classifications. [3]

- (d) Effective feedback is important when learning motor skills.

Describe each of the following types of feedback:

- Intrinsic
- Terminal
- Concurrent
- Positive.

[4]

- (e) Using a practical example, explain how a motor programme of a movement skill is created and stored. [5]

- (f) Describe the role of perception in the basic model of information processing when performing a motor skill [5]

- (g) Describe the drive reduction theory and explain how it affects the learning of motor skills in sport. [6]

[Total: 30]

Section C: Contemporary Studies in Physical Education and Sport

- 3 (a) Describe the characteristics of play. Explain the value of play to both children and adults. [6]
- (b) Give reasons why some people do not take part in sport or physical activity. [5]
- (c) Describe **four** skills that can be learned by taking part in outdoor recreation. [4]
- (d) The oath sworn on behalf of Olympic Athletes states:-
- “In the name of all competitors, I promise that we shall take part in these Olympic Games without doping and without drugs and in the true spirit of sportsmanship”.
- (i) Explain the measures which could be used to solve the continuing problem of drugs in sport. [5]
- (ii) Using examples from sport, describe the true spirit of sportsmanship. [3]
- (e) (i) Explain the benefits of sponsorship to an elite performer. [4]
- (ii) List **three** reasons why a sponsor would choose to invest in sport. [3]

[Total: 30]

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