



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

**PHYSICAL EDUCATION**

**9396/01**

Paper 1

**October/November 2009**

**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.



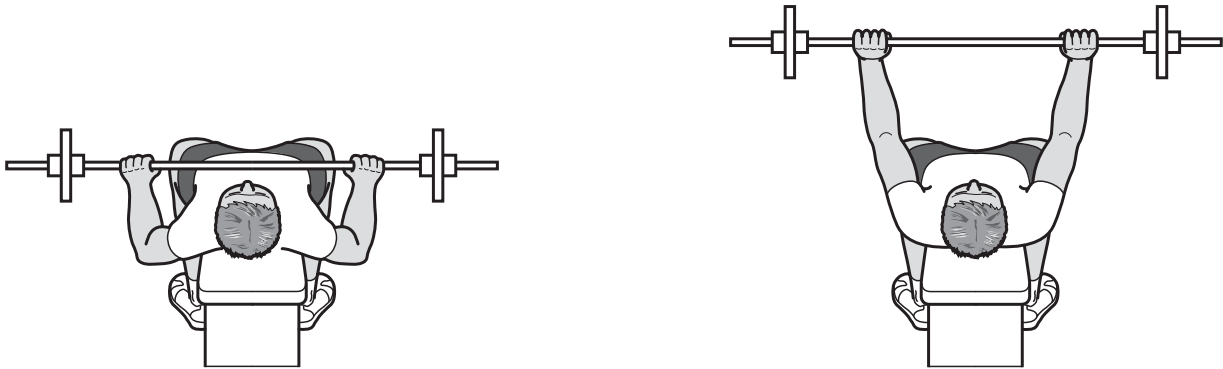
This document consists of **6** printed pages and **2** blank pages.



Answer **all** questions.

**Section A: Applied Anatomy and Physiology**

- 1 (a) The weight lifter in Fig. 1 is performing a bench press.



**Fig. 1**

Analyse fully the action of the elbow in the upward phase of the bench press.

This analysis should include a list of the articulating bones, the joint type, the movement produced, the agonist muscle, the antagonist muscle, and the type of contraction occurring in both the agonist and the antagonist muscle. [8]

- (b) Using examples from sport explain the meaning of:

- (i) concentric muscle contraction
- (ii) eccentric muscle contraction
- (iii) isometric muscle contraction

[3]

- (c) The heart contracts at regular intervals, but the timing is controlled by intrinsic, hormonal and neural factors.

Describe the contribution of the intrinsic and hormonal factors in the control of heart rate. [6]

(d) Veins offer little resistance to blood flow. When blood enters the veins the blood pressure is low and active mechanisms are needed to ensure venous return.

(i) Describe **two** of the mechanisms which help to maintain venous return. [4]

(ii) Explain why a good venous return is essential to an athlete. [3]

(e) A runner's leg muscles are richly supplied with oxygen during an 800 metre race.

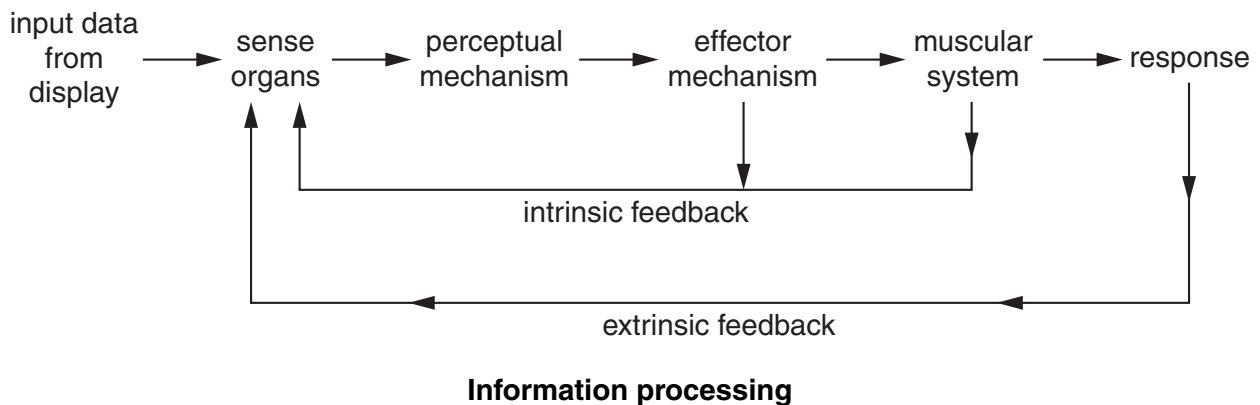
(i) Describe the movement of oxygen between the alveoli and the alveoli capillaries in the lungs during an 800 metre race. [3]

(ii) Describe the effect of altitude on the movement of oxygen between the alveoli and the alveoli capillaries. [3]

[Total: 30]

### Section B: Acquisition of Skill

- 2 (a) Ability and skill are closely linked and both are essential to achieve success in sport.
- (i) Describe **two** of the main characteristics of ability. [2]
- (ii) Describe **two** of the main characteristics of skilful movement. [2]
- (iii) Explain the links between ability and skill. [2]
- (b) Describe the characteristics of the cognitive phase of learning. [4]
- (c) Fig. 2 is a basic model of information processing.



**Fig. 2**

Using the example of a fielder catching a cricket ball, explain each section of the model. [8]

(d) Fig. 3 is a model showing the four rules of schema.

knowledge of initial conditions
knowledge of response specifications
knowledge of sensory consequences
knowledge of outcome

**Fig. 3**

(i) A skilful rounders player is introduced to the new skill of tennis.

Using this example explain each rule of schema. [4]

(ii) Explain why the schema theory is considered to be an explanation of how skills are learned. [2]

(e) A novice performer needs feedback on their performance if they are to improve.

Explain the types of feedback you would use to help the novice to become more skilful. [6]

[Total: 30]

### Section C: Contemporary Studies in Physical Education and Sport

3 (a) Football is a popular activity. Explain why it can be classed as:

(i) Play [2]

(ii) Physical education [2]

(iii) Physical recreation [2]

(iv) Sport [2]

(b) Fig. 4 is a model showing a performance pyramid. This explains the progression from a foundation level to international standard.

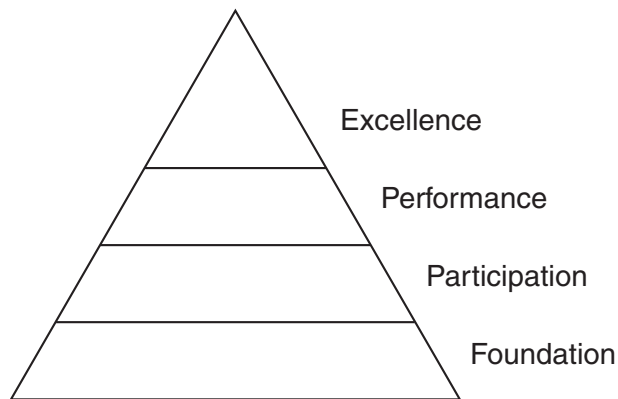


Fig. 4

(i) Using examples from sport explain each level of the pyramid. [4]

(ii) How can a country widen the participation level of the pyramid? [5]

(c) Explain why sport can be accepted as a leisure activity by some, yet as work by others. [4]

(d) Olympic success is highly regarded.

Explain why this success is important to countries in the world. [4]

(e) Choose any group of people who are under represented in sport, for example the disabled or the elderly.

Explain why they may have chosen **not to** participate. [5]

[Total: 30]



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