



Cambridge International AS & A Level

PHYSICAL EDUCATION

9396/13

Paper 1

October/November 2021

2 hours 30 minutes



You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **all** questions.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You should show all your working and use appropriate units.

INFORMATION

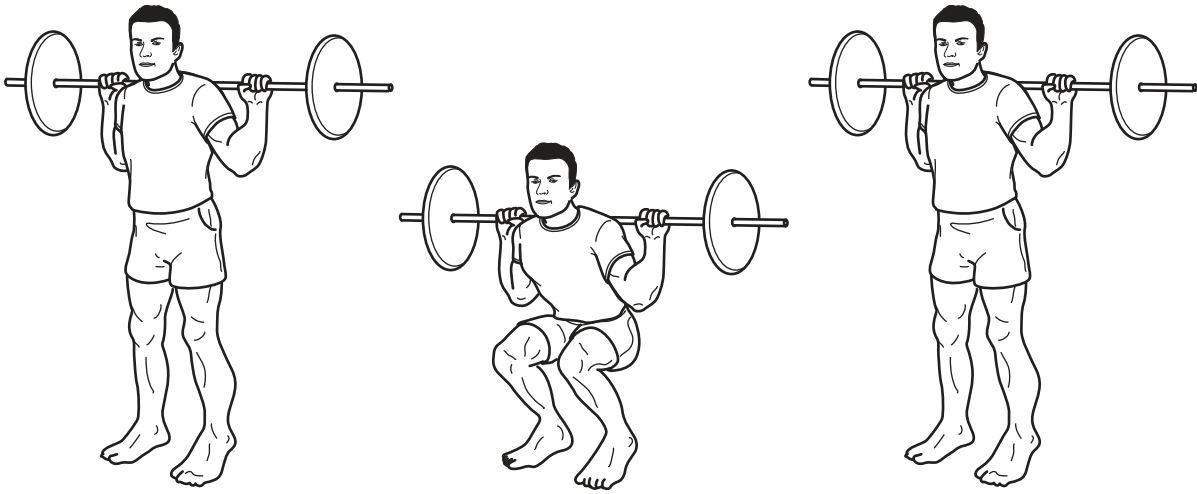
- The total mark for this paper is 90.
- The number of marks for each question or part question is shown in brackets [].

This document has **8** pages. Any blank pages are indicated.

Answer **all** questions.

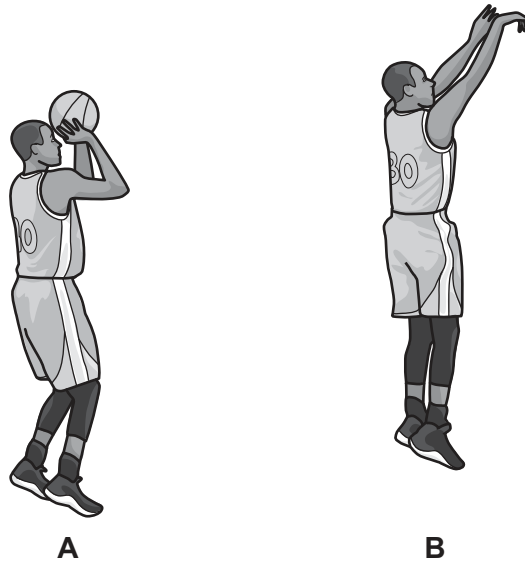
Section A: Applied anatomy and physiology

- 1 (a) The diagrams show the sequence of movements in a squat exercise.



Explain how the main agonist at the knee performs **three** different types of muscle contraction during a squat. [3]

- (b) The diagrams show a basketball player completing a shot.



Identify the items 1–8 in the table to describe a movement analysis of the shoulder joint and the wrist joint of the right arm of the performer, from position **A** to position **B**. Your analysis should include the type of synovial joint, the bones articulating at the joint, the type of movement occurring and the main agonist.

	type of synovial joint	bones articulating at the joint	type of movement occurring	main agonist
shoulder joint from A to B	1	2	3	4
wrist joint from A to B	5	6	7	8

[8]

(c) During exercise heart rate will increase.

Explain how this increase occurs. [6]

(d) Describe the pathway of oxygenated blood from the lungs to the muscles. [4]

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

(i) Explain how structures within the trachea help the respiratory system to function efficiently. [2]

(ii) The large surface area of the alveoli assists gaseous exchange.

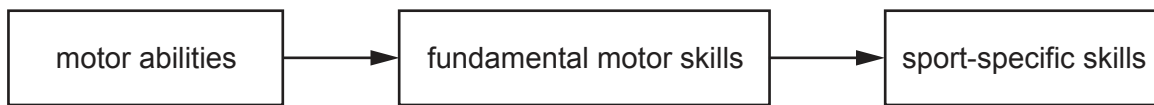
Describe other features of the alveoli that assist gaseous exchange. [3]

(f) Describe how the short-term effects of high altitude on the respiratory system can affect performers. [4]

[Total: 30]

Section B: Acquiring, developing and performing movement skills

- 2 (a) The diagram shows that in order to learn a specific skill in a sport, a performer progresses from motor abilities through fundamental motor skills to sport-specific skills.



Explain this progression using a practical example. [4]

- (b) Bandura proposed the theory of observational learning.

(i) Suggest ways a coach could make learning through observation more effective when teaching a movement skill. [5]

(ii) Another theory that explains how people learn is insight learning.

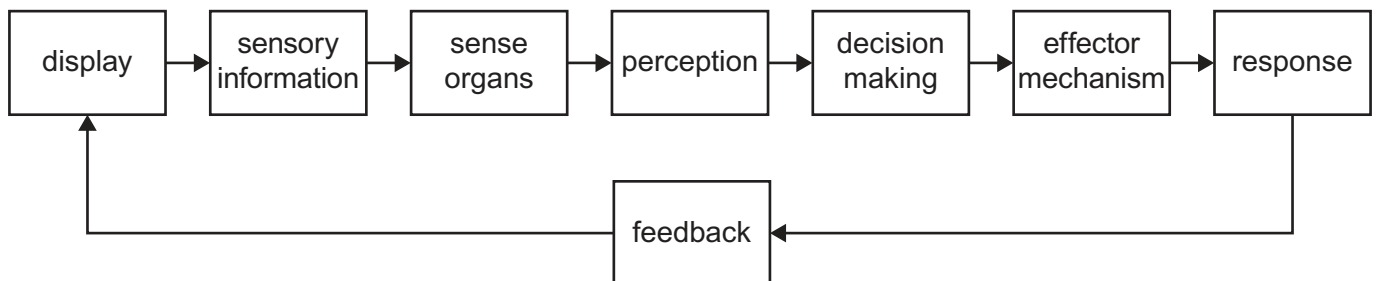
Explain the term *insight learning*. [2]

(iii) Suggest how insight learning could have a positive effect on performance. [2]

(c) (i) Describe, using a practical example, what is meant by a motor programme. [4]

(ii) Explain closed-loop control. [3]

- (d) The diagram shows an example of an information processing model.



(i) Describe, using an example, what is meant by display. [2]

(ii) Explain the roles of each of the following from the model:

- perception
- feedback.

[4]

- (e) Many physical activities are dependent on the quick reactions of a performer.

Describe how **four** factors could affect the reaction time of a performer. [4]

[Total: 30]

Section C: Contemporary studies in physical education and sport

- 3 (a) (i) Explain the term *leisure*. [3]
- (ii) Describe how an individual's choice of leisure activity reflects each of the following:
- privilege
 - purposefulness. [2]
- (b) Outline the main differences between play and sport. [3]
- (c) Describe the policies, provision and administration that are in place to achieve excellence in sport in a country of your choice. [5]
- (d) Outline the benefits for an individual of regular participation in sport. [5]
- (e) Some local communities are dependent on leisure provision.
- Explain each of the following:
- voluntary provision
 - public provision. [6]
- (f) Discuss the positive and negative effects of the media and the commercialisation of sport on spectators. [6]

[Total: 30]

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