



Cambridge International AS & A Level

PHYSICAL EDUCATION

9396/12

Paper 1

October/November 2020

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. Blank pages are indicated.



Answer **all** questions.

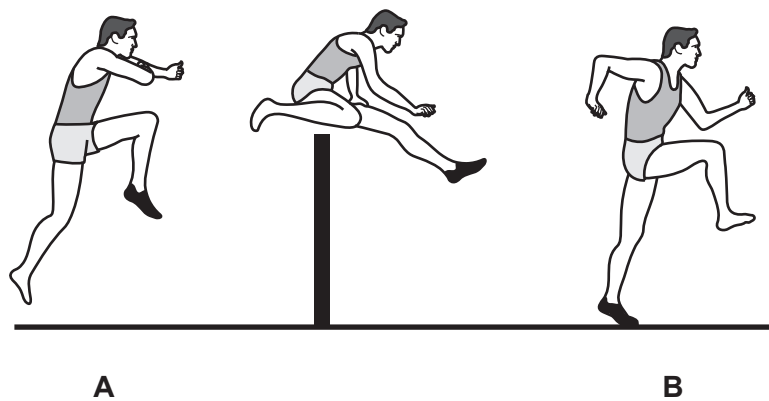
Section A: Applied anatomy and physiology

- 1 (a) Describe the following types of movement that can occur at the ankle joint and identify a main agonist involved in each type of movement.

- plantar flexion
- dorsiflexion

[4]

- (b) The diagram shows some stages in a hurdler's technique.

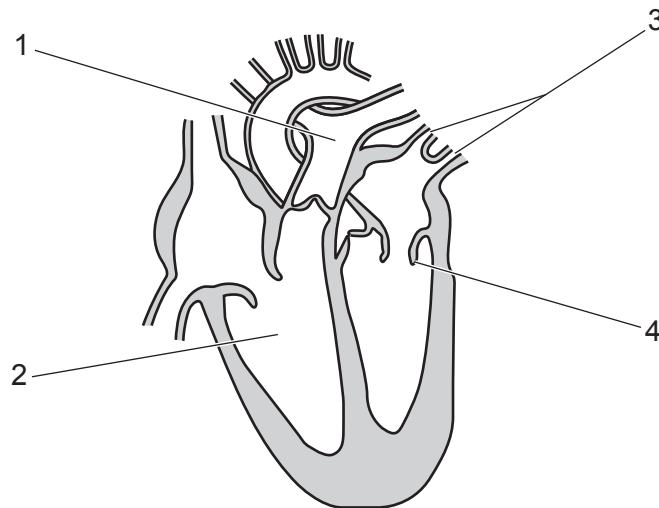


Identify the items 1–6 in the table to describe a movement analysis of the knee joint and the hip joint of the front/lead (left) leg of the athlete (indicated with a black foot) from position **A** to position **B**. Your analysis should include the type of synovial joint, the type of movement occurring and the main agonist.

	type of synovial joint	type of movement occurring	main agonist
knee joint	1	2	3
hip joint	4	5	6

[6]

(c) (i) The diagram shows the structure of the heart.



Identify the structures labelled 1 to 4 in the diagram. [4]

(ii) During a sustained period of exercise a performer's stroke volume will increase.

Explain how this increase is achieved. [4]

(d) During exercise a large percentage of blood is redistributed to the working muscles through the vascular shunt mechanism.

Explain how this redistribution of blood is achieved. [4]

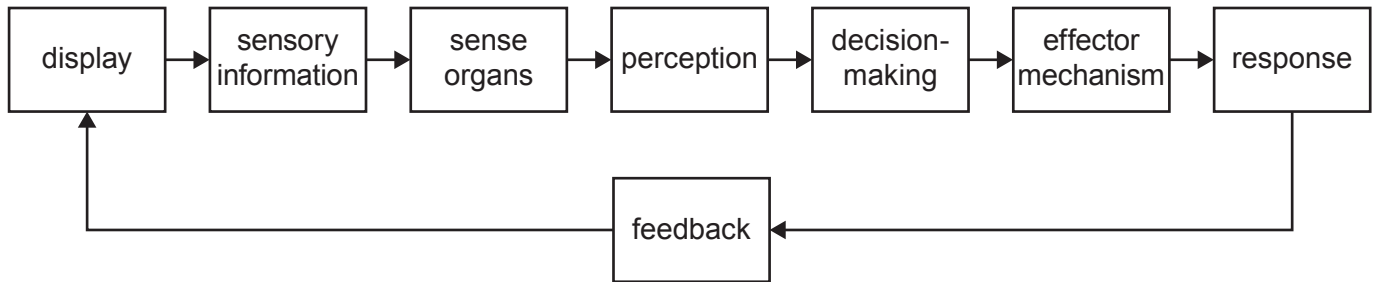
(e) Identify and explain the neural and chemical factors that control the ventilation rate of a performer during exercise. [4]

(f) Describe the effects of exercise on **four** respiratory volumes. [4]

[Total: 30]

Section B: Acquiring, developing and performing movement skills

- 2 (a) Explain, using suitable examples, what is meant by *gross motor ability* and what is meant by *psychomotor ability*. [4]
- (b) Outline the theory of operant conditioning. [6]
- (c) Explain, using an example from a sport-specific skill, open-loop control. [4]
- (d) The diagram shows an example of an information processing model.



Explain the roles of each of the following:

- sense organs
 - decision-making. [4]
- (e) Describe the characteristics and functions of long-term memory. [4]
- (f) Describe, using suitable examples of each, the following types of feedback available to a performer:
- intrinsic
 - knowledge of results
 - concurrent
 - positive. [4]
- (g) Identify and explain the functions of recognition schema. [4]

[Total: 30]

Section C: Contemporary studies in physical education and sport

- 3 (a) Describe the characteristics of play. [3]
- (b) Describe the terms *equal opportunity* and *esteem* in relation to sports participation. [2]
- (c) Describe, using suitable examples of each, the values of physical education in schools. [4]
- (d) Describe, using a country of your choice, the policies and initiatives that are in place to achieve excellence in sport. [5]
- (e) (i) Outline the benefits for society of regular participation in sport. [4]
- (ii) Explain factors that affect participation in sport. [4]
- (f) (i) Describe, using an example of each, the following terms:
- sportsmanship
 - gamesmanship. [4]
- (ii) Suggest how the ethic of fair play is encouraged and maintained in elite sport. [4]

[Total: 30]

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.