



Cambridge International AS & A Level

PHYSICAL EDUCATION

9396/11

Paper 1

May/June 2023

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

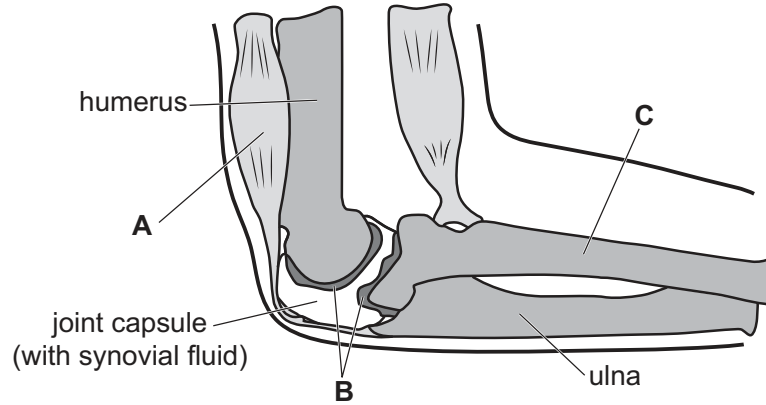
- The total mark for this paper is 90.
- The number of marks for each question or part question is shown in brackets [].

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

Answer **all** questions.

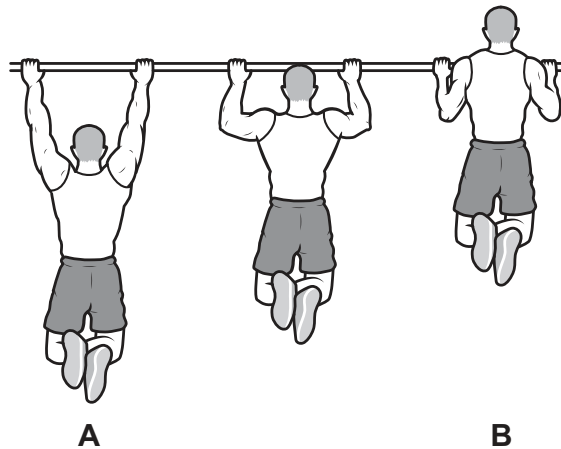
Section A: Applied anatomy and physiology

- 1 (a) The diagram shows some structures and features of the elbow joint.



- (i) Identify the muscle labelled **A**. [1]
- (ii) Identify the joint feature labelled **B**. [1]
- (iii) Identify the bone labelled **C**. [1]

- (b) The diagram shows a performer completing a pull-up.



Identify the items 1–6 in the table to describe a movement analysis of the elbow joints, shoulder joints and knee joints from position **A** to position **B**. Your analysis should include the type of movement occurring, the main agonist and the type of muscle contraction.

	type of movement occurring	main agonist	type of muscle contraction
elbow joints from A to B	1		2
shoulder joints from A to B	3	4	
knee joints from A to B		5	6

[6]

- (c) Fast glycolytic muscle fibres contract quickly and fatigue quickly.

Describe **three** other characteristics of fast glycolytic muscle fibres. [3]

- (d) Explain the route of blood from the vena cava, through the chambers and valves of the heart, to the pulmonary artery. [4]

- (e) Values for a person's cardiac output, stroke volume and heart rate are different at rest compared to during exercise.

For a 17-year-old physical education student, suggest a typical value, with an appropriate unit, for each of the following:

- cardiac output at rest
- stroke volume during exercise
- maximal heart rate during exercise.

[3]

- (f) Explain how neural factors cause a decrease in heart rate after exercise. [4]

- (g) Venous return is the flow of blood back to the heart. Venous return is assisted by gravity and the action of pocket valves in veins.

Describe **three** other mechanisms that assist venous return during exercise. [3]

- (h) Describe features of the pulmonary capillaries and the alveoli that assist gaseous exchange. [4]

[Total: 30]

Section B: Acquiring, developing and performing movement skills

2 (a) (i) Shooting in a team sport such as basketball or netball may be classified as:

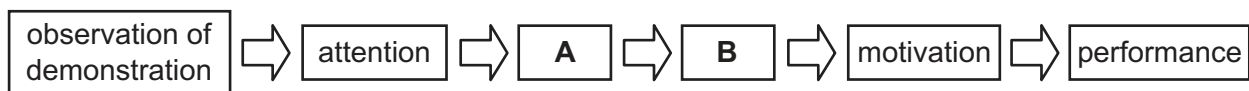
- an open skill
- a discrete skill
- a complex skill.

Justify each of these classifications. [3]

(ii) Explain the progression from motor abilities, through fundamental motor skills to the sport-specific skill of shooting in a team sport such as basketball or netball. [3]

(iii) Suggest how the development of a skill such as shooting is affected by early childhood experiences and environmental exposure. [3]

(b) The diagram shows Bandura's model of observational learning.



(i) Identify the parts of the model labelled **A** and **B**. [2]

(ii) Other than ensuring a performer is paying attention and is motivated, suggest **three** ways a coach could make learning through observation more effective when teaching a movement skill. [3]

(c) Schmidt's schema theory suggests that different sources of information may be used to adjust and evaluate motor programmes.

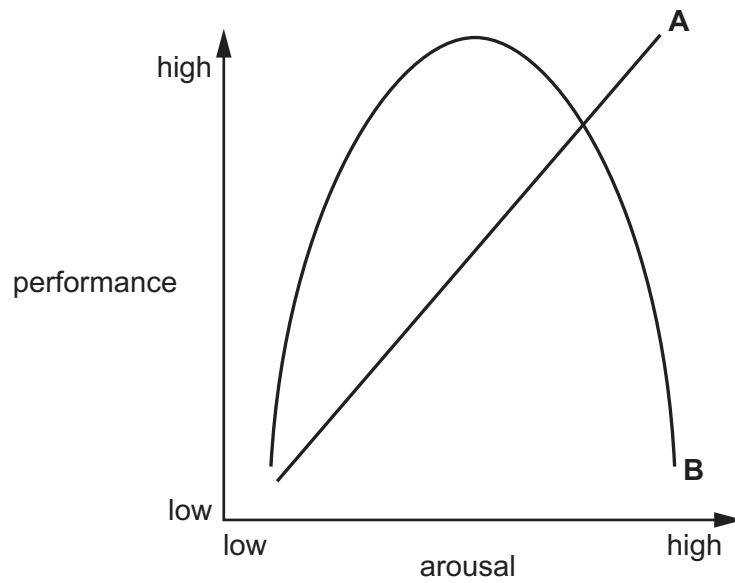
Describe the features of recall schema. [3]

(d) (i) Suggest **three** types of feedback that would be effective for a performer in the cognitive phase of learning.

Justify each of your answers. [3]

(ii) Other than the type of feedback used, describe the characteristics of the cognitive phase of learning. [3]

- (e) The graph shows two lines, **A** and **B**, that may be used to explain the effects of arousal on performance.



Use each line, **A** and **B**, to explain the effects of high levels of arousal on performance. [7]

[Total: 30]

Section C: Contemporary studies in physical education and sport

- 3 (a) Outdoor recreation activities, such as hill walking, have become increasingly popular.
- (i) Suggest reasons for the increase in the popularity of outdoor recreation activities. [4]
- (ii) Outdoor recreation activities involve some risk to the individual.
Explain, using an example from hill walking, what is meant by perceived risk. [2]
- (iii) Suggest potential benefits for an individual of participating in outdoor recreation activities. [3]
- (b) (i) Elite sport is usually played by professionals.
Describe other features of elite sport. [2]
- (ii) Describe, using a country of your choice, the policies and initiatives that are in place to help develop elite performers. [4]
- (c) Suggest **three** characteristics of the voluntary provision of leisure facilities. [3]
- (d) Suggest negative effects of commercialisation on sport. [4]
- (e) Describe the following terms. Give an example of each from basketball.
- sportsmanship
 - gamesmanship
- [4]
- (f) Some performance-enhancing drugs increase aggression, which may lead to violent behaviour.
Suggest other reasons why some sport performers become violent during competitive performance. [4]

[Total: 30]

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