



# Cambridge International AS & A Level

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**PHYSICAL EDUCATION**

**9396/11**

Paper 1

**May/June 2020**

**2 hours 30 minutes**



You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

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## 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 [ ].

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This document has **4** pages. Blank pages are indicated.

Answer **all** questions.

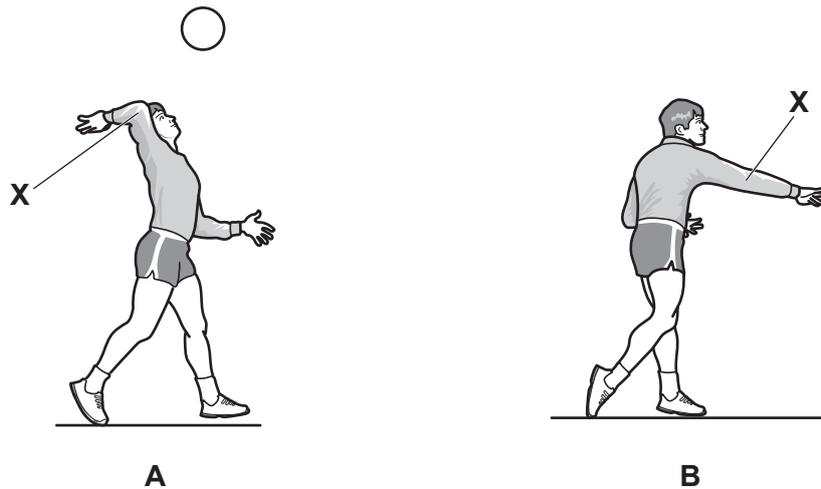
**Section A: Applied anatomy and physiology**

- 1 (a) Explain, using examples from physical activities, the type of movement caused by each of the following muscles:

- iliopsoas
- gracilis.

[4]

- (b) The diagrams show a performer completing a volleyball serve.



Identify the items 1–5 in the table to describe a movement analysis of the elbow joint and the shoulder joint of the arm labelled **X** 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 joint	1	2	3
shoulder joint	4	5	

[5]

- (c) During exercise, the heart rate of a performer will increase.

(i) Define the terms *cardiac output* and *stroke volume*. [2]

(ii) State the relationship between heart rate, cardiac output and stroke volume. [1]

(iii) Describe the conduction system of the heart. [5]

- (d) Draw and label a graph to show a typical heart rate response of a healthy 18-year-old to a maximal 1-minute training run followed by a 10-minute recovery period. [6]

(e) (i) Explain how the structure of the trachea aids the functions of the respiratory system. [2]

(ii) Explain neural and chemical factors that control the ventilation of a performer during exercise. [5]

[Total: 30]

**Section B: Acquiring, developing and performing movement skills**

- 2 (a) Describe what is meant by the terms *gross motor ability* and *psychomotor ability*. [2]
- (b) Explain how the development of a motor skill is affected by early childhood experiences and environmental exposure. [3]
- (c) Skilled movements are controlled by motor programmes.
- (i) Describe closed-loop control. [3]
- (ii) Explain, using a practical example, how a motor programme for a movement skill is created and stored. [3]
- (d) (i) Describe the role of perception during information processing when performing a motor skill. [3]
- (ii) Suggest **four** strategies that a coach could use to improve a performer's selective attention. [4]
- (e) (i) State the main functions of feedback when learning a motor skill. [3]
- (ii) Justify which types of feedback are most appropriate for a performer in the associative phase of learning. [4]
- (f) Describe how drive theory may be used to explain the effects of arousal on performance. [5]

[Total: 30]

**Section C: Contemporary studies in physical education and sport**

- 3 (a) During leisure time many people choose to participate in physical activities.
- (i) Describe **three** differences between play and sport. [3]
- (ii) Explain the importance of physical recreation to each of the following:
- individuals
  - society. [4]
- (iii) State **two** characteristics of outdoor recreation. [2]
- (b) (i) Describe **two** characteristics of elite sport. [2]
- (ii) Describe, using a country of your choice, how potential elite performers are identified and developed. [4]
- (c) Many local communities depend on leisure provision in order to take part in physical activities.
- (i) Explain each of the following terms:
- voluntary provision
  - public provision. [4]
- (ii) Outline the benefits of private provision for a local community. [3]
- (d) Suggest ways to encourage more women to take part in physical activity. [4]
- (e) Suggest measures that could be taken to solve the continuing problem of drugs in sport. [4]

[Total: 30]

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