



# Cambridge International AS & A Level

**PHYSICAL EDUCATION**

**9396/12**

Paper 1

**May/June 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

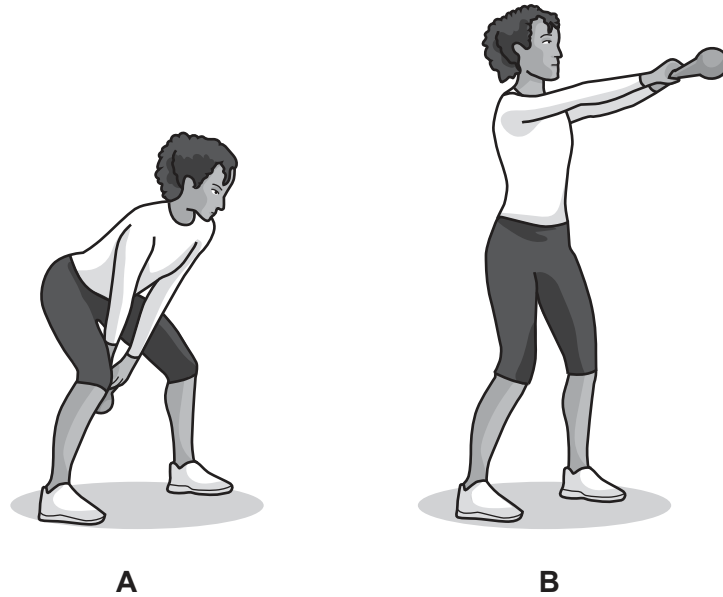
- The total mark for this paper is 90.
- The number of marks for each question or part question is shown in brackets [ ].

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

Answer **all** questions.

**Section A: Applied anatomy and physiology**

- 1 (a) The diagrams show a performance of a weight-training exercise.



Identify the items 1–5 in the table to describe a movement analysis of the shoulder joint and hip joint 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 |
|--|----------------------------|--------------|----------------------------|
| shoulder joint from <b>A</b> to <b>B</b> | 1                          | 2            | 3                          |
| hip joint from <b>A</b> to <b>B</b>      | 4                          | 5            |                            |

[5]

- (b) The synovial joint at the shoulder has a large range of movement.

Describe structures and features of the shoulder joint that allow this large range of movement.

[3]

- (c) Describe each of the following types of muscle contraction:

- eccentric
- isometric.

[2]

- (d) (i) Define the term *cardiac output*. State a unit for cardiac output.

[2]

- (ii) Describe how the sinoatrial node (SAN) regulates heart rate as exercise begins.

[5]

- (e) Describe the pulmonary circulatory system.

[4]

- (f) (i) Identify features within the lungs, other than those of the bronchi, that assist gaseous exchange. [5]
- (ii) Explain how **two** structural features of the bronchi help the respiratory system to function efficiently. [4]

[Total: 30]

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

- 2 (a) Explain, using different practical examples for each, the following terms:
- gross skill
  - discrete skill
  - complex skill
  - low organisation skill.
- [4]
- (b) Describe, using a practical example, each of the following elements of Bandura's theory of observational learning:
- attention
  - retention
  - motor reproduction
  - motivation.
- [4]
- (c) Identify and describe the **two** types of reinforcement that may be used during the learning of motor skills. [2]
- (d) Skilled movements are controlled by motor programmes.
- Describe, using a suitable example, how motor programmes are formed and stored. [4]
- (e) (i) Describe closed-loop control of motor programmes. [4]
- (ii) Explain why closed-loop control may **not** be applicable to all skills. [3]
- (f) Identify each of the **three** phases of learning. Describe a different characteristic of performance in each phase. [6]
- (g) Explain what is meant by drive-reduction theory. [3]
- [Total: 30]

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

- 3 (a) (i)** Define what is meant by physical education in schools. [1]
- (ii)** Describe the characteristics of physical education in schools. [4]
- (b)** Compare cycling as physical recreation with cycling as a sport. [5]
- (c)** Describe, using a country of your choice, how potential elite performers are identified and developed. [5]
- (d)** Suggest ways that the base of the performance pyramid could be widened. [3]
- (e)** Suggest benefits for a local community of private bodies providing leisure facilities. [3]
- (f)** Suggest strategies to increase participation in physical activity by disabled people. [3]
- (g)** Outline the advantages and disadvantages of the relationship between sport and sponsorship. [6]

[Total: 30]





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