Cambridge Assessment
International Education

Cambridge International AS Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

SPORT & PHYSICAL EDUCATION **8386/12**

Paper 1 Theory **May/June 2025**

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use a calculator.
- You should show all your working and use appropriate units.

INFORMATION

- The total mark for this paper is 70.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **16** pages. Any blank pages are indicated.

[Turn over

1 The photograph shows a badminton player performing a jump smash.

Content removed due to copyright restrictions.

(a) Complete the table for the movement from **A** to **B**.

joint	type of synovial joint	type of movement	main agonist
player's right hip	ball and socket		
player's right ankle			

[5]

(b) The diagram represents the time taken to respond to two different stimuli when performing a skill in a racket sport such as badminton.

(i) Label the diagram to identify the start and the finish of the psychological refractory period.

stimulus 1   response 1

stimulus 2   response 2

[1]

(ii) Use an example to explain how the psychological refractory period may give a player an advantage in a racket sport such as badminton.

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.... [3]

(c) Explain the information processing that occurs when a player returns a smash in badminton.

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.... [6]

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(d) Badminton players need high-quality equipment and science support to achieve excellence.

Describe **three** other types of provision a badminton player needs to achieve excellence.

1 ....

2 ....

3 ....

[3]

(e) State **four** forms of competition manipulation that may occur in a sport such as badminton.

1 ....

2 ....

3 ....

4 ....

[4]

2 **(a)** Describe the motion of the object in each of the graphs.

(i)
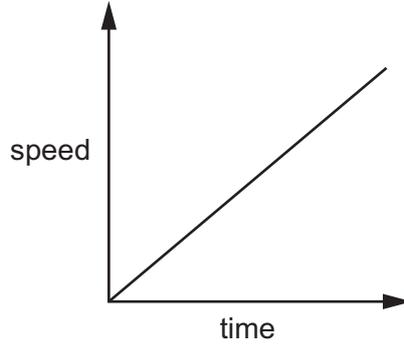
.... [1]

(ii)
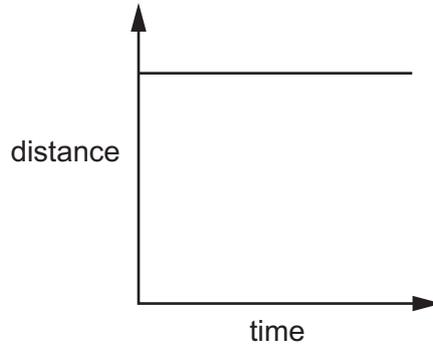
.... [1]

(iii)
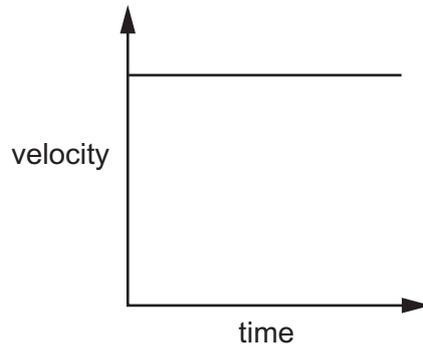
.... [1]

(b) Describe how the graph in **(a)(iii)** can be used to determine the displacement of the object.

....

.... [1]

(c) Velocity is an example of a vector quantity.

State what is meant by a vector quantity.

....

.... [1]

3 **(a)** Explain how knowledge of Schmidt's schema theory may be used to develop passing skills for field hockey.

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.... [6]

(b) Explain how advances in the use of the following types of technology may help a field hockey player:

equipment ....

....

....

....

....

....

footwear ....

....

....

....

....

software. ....

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[6]

4 Suggest how a growth in media interest has increased the commercialisation of sport.

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.... [5]

5 The diaphragm, the internal intercostals and the external intercostals are respiratory muscles used during exercise.

State **three** other respiratory muscles involved in breathing during exercise.

1 ....

2 ....

3 ....

[3]

6 **(a)** The photographs show the performance of a back somersault.

The performer has angular motion during this somersault.

(i) Explain how angular motion is created by the performer.

....

....

.... [1]

(ii) Describe moment of inertia.

....

.... [1]

(iii) Describe the factors that affect the moment of inertia of the performer during this somersault.

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.... [2]

(b) A performer uses fast glycolytic (FG) muscle fibres for a back somersault.

Suggest why.

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.... [5]

(c) Students may learn movement skills, such as a somersault, during physical education.

Describe **five** characteristics of physical education, other than learning to move.

1 ....

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2 ....

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3 ....

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4 ....

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5 ....

....

[5]

(d) Different types of motivation may be used when learning a somersault.

Suggest an example of each of the following types of motivation:

intrinsic ....

....

extrinsic tangible. ....

....

[2]

7 **(a)** The diagram shows features of the heart.
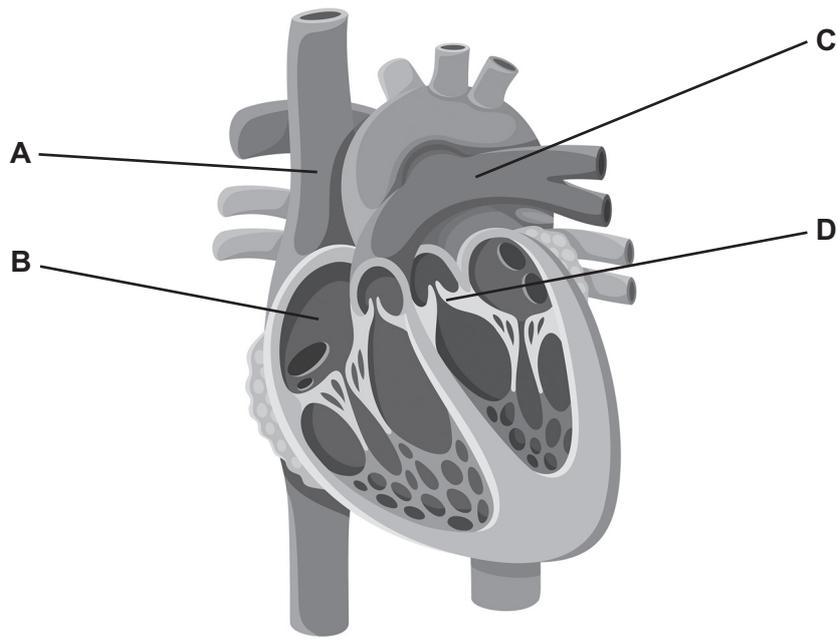
Identify the features of the heart labelled **A** to **D**.

A ....

B ....

C ....

D ....

[4]

(b) Describe a different function for each of the following features of the heart:

myocardium ....

....

septum. ....

....

[2]

(c) An individual has a resting cardiac output of 5.6 litres per minute and a resting stroke volume of 70 millilitres.

Calculate the individual's resting heart rate.

resting heart rate = ... beats per minute [1]

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