Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

3726244065

PHYSICAL EDUCATION **0413/13**

Paper 1 Theory **May/June 2023**

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 100.
- The number of marks for each question or part question is shown in brackets [ ].

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

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[Turn over

1 The diagram shows an association football goalkeeper making a save.



(a) Describe how **three** named components of fitness are required by a goalkeeper.

component 1 .....

description .....

.....

component 2 .....

description .....

.....

component 3 .....

description .....

.....

[6]

(b) State different examples of exercises that can be included in the **three** named phases of a warm up for a goalkeeper. Explain the benefit of each phase.

name of phase 1 .....

.....

example .....

explanation of the benefit of phase 1 .....

.....

name of phase 2 .....

.....

example .....

explanation of the benefit of phase 2 .....

.....

name of phase 3 .....

.....

example .....

explanation of the benefit of phase 3 .....

.....

[6]

(c) Define the following terms and describe **one** example for each from association football:

sportsmanship

definition .....

.....

example .....

.....

gamesmanship.

definition .....

.....

example .....

.....

[4]

[Total: 16]

2 **(a)** Complete the table to describe the named terms.

terms	description
leisure time	time spent away from work and free from obligations / the time we have when we are not working or completing our family and home duties
(physical) recreation	
play	
sport	

[3]

(b) Explain how **four** different factors may influence what activities people do during their leisure time.

.....

.....

.....

.....

.....

.....

.....

..... [4]

[Total: 7]

3 The photograph shows runners in a cross-country race.



(a) Identify **two** different methods of training that a cross-country runner may decide to use. Give a different justification for each.

method of training 1 .....

justification .....

.....

method of training 2 .....

justification .....

.....

[4]

(b) Describe **three** long-term effects of exercise that a cross-country runner may experience.

1 .....

2 .....

3 .....

[3]

(c) Recovery is an important aspect of a cross-country runner's training programme.

(i) Describe what is meant by EPOC.

.....

.....

.....

.....

.....

..... [3]

(ii) Explain **three** factors that can affect recovery time.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

[Total: 13]

4 **(a)** Describe, using examples from a named physical activity, how cognitive anxiety and somatic anxiety differ.

physical activity .....

description .....

.....

.....

.....

.....

.....

.....

.....

[4]

(b) Visualisation is one relaxation technique that can be used by a performer to control anxiety.

Describe **two** other named relaxation techniques.

technique 1 .....

description .....

.....

technique 2 .....

description .....

.....

[4]

[Total: 8]

5 Performance enhancing drugs (PEDs) are used by some performers to gain an unfair advantage.

Complete the table to show:

- different types of PEDs that may be taken by performers in the physical activities to improve their performance
- different examples of effects of PEDs on performance in the physical activities
- different health problems that may occur due to the PED taken.

physical activity	type of PED	example of effect on performance	health problem that may occur
judo	diuretics	reduce weight quickly to make a lower weight category	dehydration
discus	anabolic steroids		heart disease
golf			low blood pressure
sprinting		increase alertness	

[5]

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6 The photograph shows two tennis players performing in a competitive match.



(a) (i) A tennis serve can be classified as a 'closed' skill. Justify this classification.

.....

..... [1]

(ii) A tennis serve can be placed on different skill classification continua.

Other than the open and closed continuum, justify where a tennis serve would be placed on **two** named skill classification continua.

name of continuum 1 .....

justification .....

.....

name of continuum 2 .....

justification .....

.....

[4]

(b) A basic information processing model can be used to explain the actions of the player receiving the serve.

(i) With reference to the player receiving the serve, describe each of the following stages of a basic information processing model:

input

description .....

.....

decision-making

description .....

.....

output

description .....

.....

feedback.

description .....

.....
[4]

(ii) Explain the concept of single-channel hypothesis.

.....

..... [1]

[Total: 10]

7 Describe **four** traditional differences between amateur performers and professional performers.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

8 **(a)** State what is meant by the term force.

..... [1]

(b) Explain how **two** named forces act on a sprinter when they are running.

force 1 .....

explanation .....

.....

force 2 .....

explanation .....

.....

[4]

(c) **(i)** Draw and label a diagram of a first class lever.

[2]

(ii) Describe, using a named physical activity, an example of when a first class lever is used.

physical activity .....

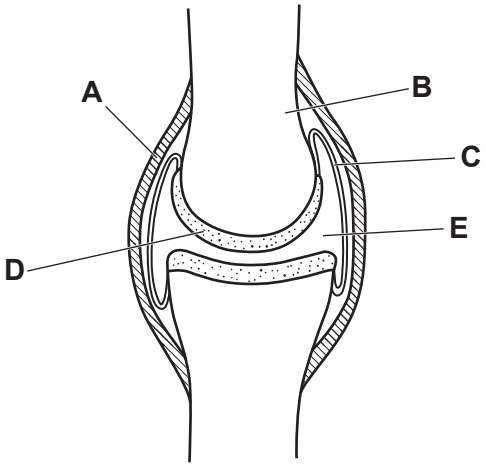
example .....

.....

[1]

[Total: 8]

9 The diagram shows the structure of a typical synovial joint.



(a) Identify **one** type of synovial joint in the body.

..... [1]

(b) **(i)** Draw **five** lines to match the components of the synovial joint to the letters **A** to **E**.

component	letter on diagram
cartilage	**A**
bone	**B**
ligament	**C**
synovial fluid	**D**
synovial membrane	**E**

[4]

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(ii) Describe **one** different function for each of the following components:

cartilage .....

.....

ligament .....

.....

synovial fluid .....

.....

synovial membrane. .....

.....

[4]

[Total: 9]

10 Explain how each of the following muscle fibre types may benefit a long-distance cyclist:

slow-twitch muscle fibres

.....

.....

.....

.....

fast-twitch muscle fibres.

.....

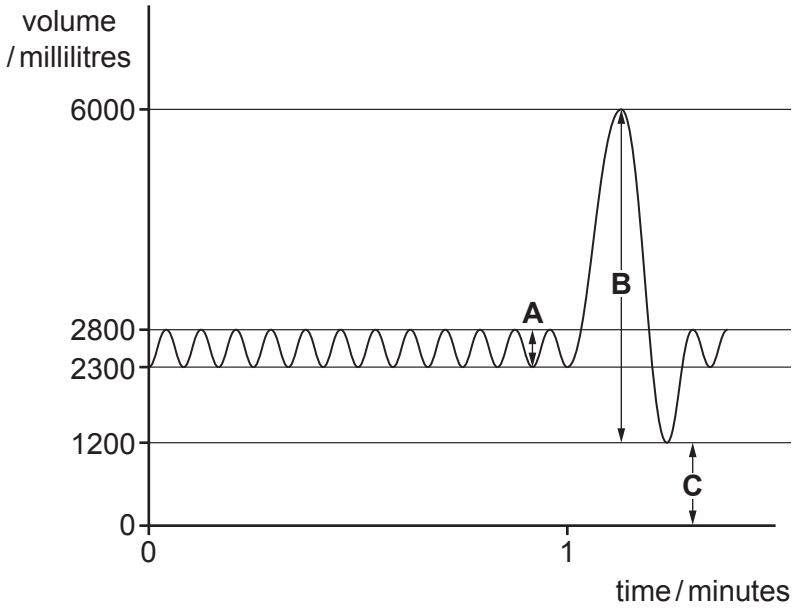
.....

.....

.....

[4]

11 The diagram shows a performer's breathing volumes on a spirometer trace.



(a) (i) Identify the breathing volumes labelled **A**, **B** and **C**.

A .....

B .....

C .....

[3]

(ii) Calculate the volumes of **A**, **B** and **C**.

A .....

.....

B .....

.....

C .....

.....

[3]

(iii) Calculate the performer's minute ventilation for the first minute shown.

.....

..... [1]

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(b) The respiratory muscles contract when breathing in.

Describe a different function for each of **two** named respiratory muscles when breathing in.

muscle 1 .....

function .....

.....

muscle 2 .....

function .....

.....

[4]

[Total: 11]

12 **(a)** Explain how the function of each of the following types of blood vessel is supported by their structure:

arteries .....

.....

veins .....

.....

capillaries. .....

.....

[3]

(b) Define cardiac output.

.....

.....

.....

..... [2]

[Total: 5]

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