* 0000800000001 *

Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

2074267910

PHYSICAL EDUCATION **0413/13**

Paper 1 Theory **October/November 2024**

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.

© UCLES 2024

[Turn over

1 State the **two** main types of motivation.

1 .....

2 .....

[2]

2 Use specific examples from a named physical activity to describe how a coach can use **three** named types of guidance to improve performance.

physical activity .....

type of guidance 1 .....

example .....

.....

.....

type of guidance 2 .....

example .....

.....

.....

type of guidance 3 .....

example .....

.....

.....

[6]

DO NOT WRITE IN THIS MARGIN

3 Sportsmanship and gamesmanship are often seen in sporting competitions.

(a) Describe each of the following:

sportsmanship .....

.....

gamesmanship. .....

.....

[2]

(b) Describe **two** different examples of gamesmanship from a named physical activity.

physical activity .....

example 1 .....

.....

example 2 .....

.....

[2]

[Total: 4]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

4 The photograph shows a performer mountain biking.

Content removed due to copyright restrictions.

(a) When mountain biking, performers require a high level of cardiovascular endurance to ride long distances without tiring.

Other than cardiovascular endurance, explain how **four** named components of fitness may benefit a performer when mountain biking.

component 1 .....

explanation of benefit .....

.....

component 2 .....

explanation of benefit .....

.....

component 3 .....

explanation of benefit .....

.....

component 4 .....

explanation of benefit .....

.....

[8]

DO NOT WRITE IN THIS MARGIN

(b) Suggest **three** different real risks for a performer when mountain biking. Suggest a different strategy that may be used to reduce each risk.

real risk 1 .....

strategy .....

.....

real risk 2 .....

strategy .....

.....

real risk 3 .....

strategy .....

.....

[6]

[Total: 14]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

5 **(a)** Identify **three** nutrients. Describe a different function of each nutrient.

nutrient 1 .....

function .....

nutrient 2 .....

function .....

nutrient 3 .....

function .....

[6]

(b) Explain the different energy needs for:

males compared with females .....

.....

teenagers compared with young children .....

.....

active lifestyles compared with sedentary lifestyles. .....

.....

[3]

[Total: 9]

6 Long-distance runners need high levels of cardiovascular endurance to perform well.

(a) Describe how a named fitness test is carried out to measure a performer's cardiovascular endurance.

name of test .....

description .....

.....

.....

.....

.....

.....

.....

.....

[4]

DO NOT WRITE IN THIS MARGIN

(b) Continuous training is one method of training often used by long-distance runners to improve their cardiovascular endurance.

(i) Other than improving cardiovascular endurance, suggest **two** advantages of continuous training for a long-distance runner.

1 .....

.....

2 .....

.....

[2]

(ii) Suggest **two** disadvantages of continuous training for a long-distance runner.

1 .....

.....

2 .....

.....

[2]

(c) **(i)** Describe VO_2 max.

.....

..... [1]

(ii) Other than training, identify **two** factors that may affect a performer's VO_2 max.

1 .....

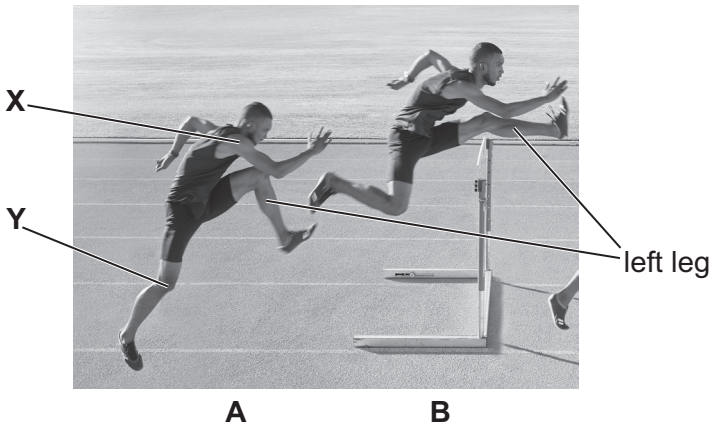
2 .....

[2]

[Total: 11]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

7 The photograph shows a performer in a sprint hurdles race.



(a) Identify the different types of synovial joint labelled **X** and **Y**.

X .....

Y .....
[2]

(b) **(i)** Identify the type of movement at the performer's left knee joint from position **A** to position **B**.

..... [1]

(ii) Describe how antagonistic muscle action causes the movement at the performer's left knee joint from position **A** to position **B**.

.....

.....

.....

.....

.....

..... [4]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

(c) Sprint hurdling uses fast-twitch muscle fibres.

Describe **three** differences between fast-twitch muscle fibres and slow-twitch muscle fibres.

1 .....

.....

.....

2 .....

.....

.....

3 .....

.....

.....

[3]

(d) **(i)** Identify the class of lever at the performer's left knee during the sprint hurdles.

..... [1]

(ii) Draw a labelled diagram of the class of lever you identified in **(d)(i)**.

[2]

[Total: 13]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

BLANK PAGE

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

8 **(a)** Use examples from **four** different physical activities to explain how each of the following factors can affect the skill level of a performer:

age and maturity

physical activity 1 .....

explanation .....

.....

.....

culture

physical activity 2 .....

explanation .....

.....

.....

arousal conditions

physical activity 3 .....

explanation .....

.....

.....

facilities.

physical activity 4 .....

explanation .....

.....

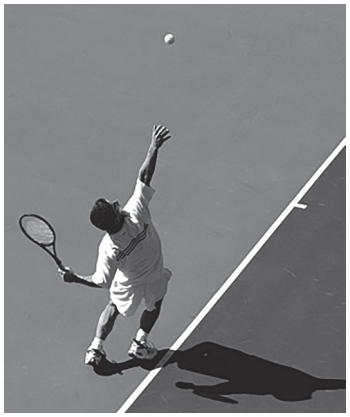
.....

[4]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

(b) Skills can be classified using different continua.

Justify the placement of each of the following skills on a different named skill classification continuum:



serving in tennis

continuum .....

placement with justification .....

.....

.....

Content removed due to copyright restrictions.

dribbling in hockey

continuum .....

placement with justification .....

.....

.....

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

Content removed due to copyright restrictions.

tackling in rugby.

continuum .....

placement with justification .....

.....

.....
[6]

[Total: 10]

9 **(a)** A 200-metre sprinter may perform 10 minutes of jogging at the start of a warm-up so that their heart rate increases.

Suggest **three** other short-term physiological effects of 10 minutes of jogging.

1 .....

2 .....

3 .....
[3]

(b) Complete the sentences about anaerobic respiration.

Sprinting mainly uses anaerobic respiration, which breaks down glucose without using

..... .

Sprinting is a .....-intensity, short-duration activity.

Anaerobic respiration can only be continued for a short time because of the build-up of

..... acid.
[3]

(c) Describe the role of EPOC during recovery following a 200-metre sprint.

.....

.....

.....

..... [2]

[Total: 8]

10 **(a)** The World Health Organization (WHO) defines health as 'a state of complete **X**, mental and **Y** well-being and not merely the absence of disease or infirmity'.

Identify the missing words labelled **X** and **Y**.

X .....

Y .....

[2]

(b) Describe aspects of positive mental health and well-being.

.....

.....

.....

.....

.....

..... [3]

[Total: 5]

11 Identify the **two** main personality types. Suggest a different physical activity that each personality type may take part in. Justify each choice of physical activity.

main personality type 1 .....

physical activity for this type of personality .....

justification .....

.....

main personality type 2 .....

physical activity for this type of personality .....

justification .....

.....

[4]

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

12 Identify **three** different types of sponsorship. Explain how each type of sponsorship may benefit an event.

type of sponsorship 1 .....

benefit .....

.....

.....

type of sponsorship 2 .....

benefit .....

.....

.....

type of sponsorship 3 .....

benefit .....

.....

.....

[6]

13 State the names of the **two** main blood vessels that are attached to the right side of the heart. Describe **two** structural differences between these types of blood vessel.

name of blood vessel 1 .....

name of blood vessel 2 .....

structural difference 1 .....

.....

structural difference 2 .....

.....

[4]

14 Complete the table to give different reasons for each stage of the RICE method of treating injuries.

description of stage of the RICE method	reason for stage
stop the performer from playing	
apply ice to the injury	
wrap a bandage around the injury	
raise the injury above the level of the heart	

[4]

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.