Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

8724533525

PHYSICAL EDUCATION **0413/11**

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.

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1 Identify which two different components of blood are described.

component 1: consists mainly of water to allow substances to dissolve and be transported easily

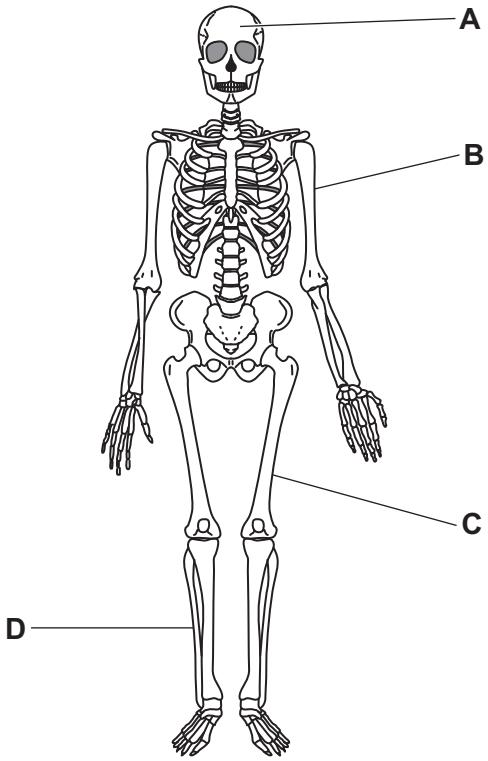
.....

component 2: contains an enzyme that causes blood to clot when there is a cut to the skin or damage to blood vessels

.....

[2]

2 **(a)** The diagram shows the human skeleton.



(i) Identify the bones labelled **A**, **B**, **C** and **D**.

A .....

B .....

C .....

D .....

[4]

(ii) Explain, using examples from a named physical activity, **two** different functions of the skeleton provided by bone **A**.

physical activity .....

function 1 .....

.....

example .....

.....

function 2 .....

.....

example .....

.....

[4]

(iii) Classify the bones labelled **A** and **B**.

A .....

B .....

[2]

[Total: 10]

3 The photograph shows a table tennis performer who requires good reaction time and coordination to play a backhand shot.

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(a) Describe a named fitness test to measure reaction time.

name of test .....

description .....

.....

.....

.....

.....

.....

[4]

(b) Explain how **two** other named components of fitness may benefit a table tennis performer.

component of fitness 1 .....

explanation .....

.....

component of fitness 2 .....

explanation .....

.....

[4]

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(c) The backhand shot in table tennis can be placed on different skill classification continua.

Justify where the backhand shot would be placed on a named skill classification continuum.

name of continuum .....

justification .....

.....

[2]

(d) A characteristic of a skilled performance is that it is aesthetically pleasing.

Describe, using examples from a named physical activity, **two** other characteristics of a skilled performance.

physical activity .....

characteristic 1 .....

example .....

.....

characteristic 2 .....

example .....

.....

[4]

[Total: 14]

4 Suggest **two** different examples of sportsmanship and **two** different examples of gamesmanship associated with a named physical activity.

physical activity .....

sportsmanship 1 .....

.....

sportsmanship 2 .....

.....

gamesmanship 1 .....

.....

gamesmanship 2 .....

.....

[4]

5 A coach may demonstrate a skill as a form of visual guidance.

(a) Suggest **two** advantages and **two** disadvantages for a performer when visual guidance is used.

advantage 1 .....

.....

advantage 2 .....

.....

disadvantage 1 .....

.....

disadvantage 2 .....

.....

[4]

(b) **(i)** Identify an example of manual / mechanical guidance in a named physical activity.

physical activity .....

example .....

.....

[1]

(ii) Describe an advantage that manual / mechanical guidance provides for a performer.

.....

..... [1]

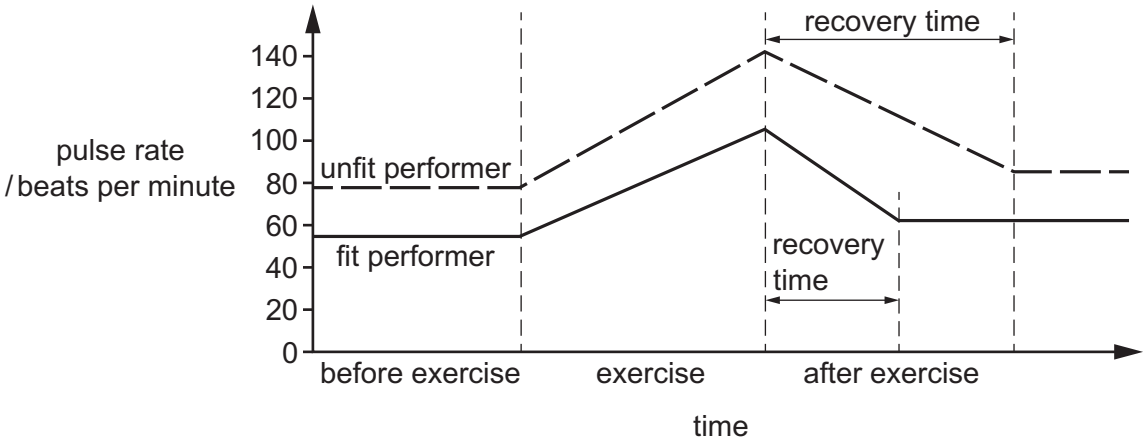
(c) Describe how goal-setting can help to control the anxiety of a performer.

.....

..... [1]

[Total: 7]

6 **(a)** The graph shows the pulse rate of a fit performer and an unfit performer when completing the same activity with the same level of intensity.



(i) Describe **three** physiological reasons why the pulse rate of the unfit performer is higher than the pulse rate of the fit performer as shown on the graph.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(ii) Describe the process of Excess Post-exercise Oxygen Consumption (EPOC) during recovery.

.....

.....

.....

.....

.....

..... [3]

(b) Describe **one** named breathing volume that increases as a result of starting to exercise.

breathing volume .....

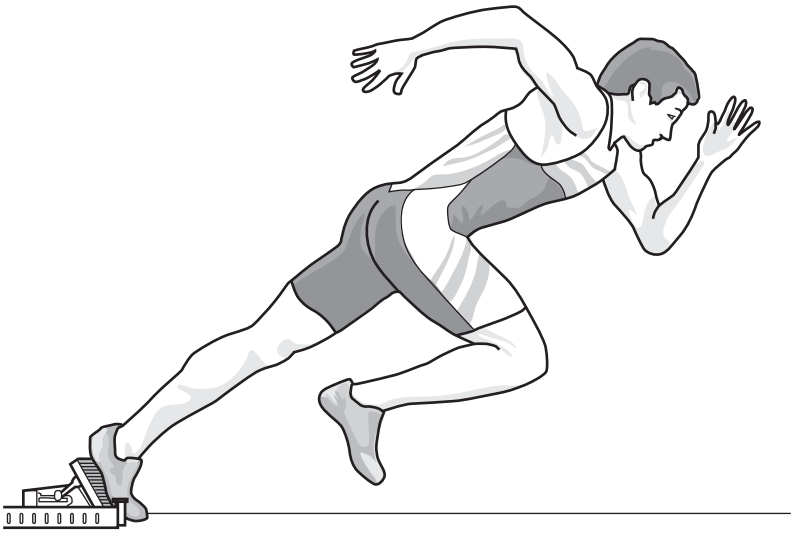
description .....

.....

[2]

[Total: 8]

7 The diagram shows a 100-metre sprinter at the start of a race.



(a) Identify **three** different forces acting on the 100-metre sprinter at the start of the race.

Explain how each force affects the sprinter.

force 1 .....

explanation .....

.....

force 2 .....

explanation .....

.....

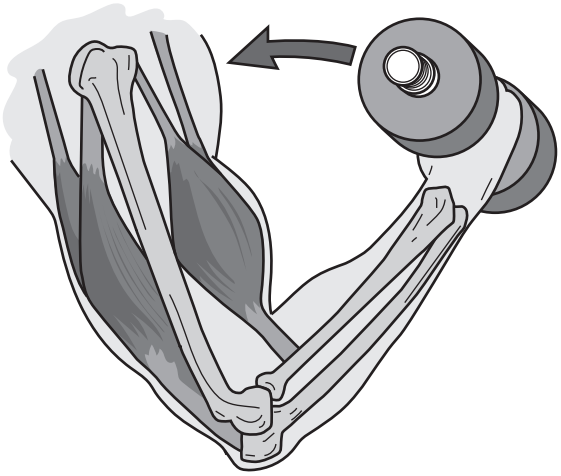
force 3 .....

explanation .....

.....

[6]

(b) The diagram shows the upward phase of a bicep curl.



(i) Label the diagram to identify the fulcrum, resistance and effort in the upward phase of the bicep curl. [3]

(ii) State the class of lever being used in the upward phase of the bicep curl.

class of lever ..... [1]

[Total: 10]

8 Different activities have different energy demands and training needs.

(a) Energy can be released aerobically or anaerobically depending on the demands made during the activity.

Complete the table by identifying a different activity to match the approximate percentage of aerobic and anaerobic demands for the activity.

activity	approximate percentage of aerobic demand	approximate percentage of anaerobic demand
1	5	95
2 netball	60	40
3	95	5

[2]

(b) Describe **three** characteristics of fast-twitch muscle fibre types.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(c) **(i)** State the component of fitness measured by VO_2 max level.

..... [1]

(ii) Explain **two** named factors that can affect a performer's VO_2 max level.

factor 1 .....

explanation .....

.....

factor 2 .....

explanation .....

.....

[4]

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(d) Explain **two** advantages and **two** disadvantages of high-altitude training for performers who take part in endurance events.

advantage 1 .....

.....

advantage 2 .....

.....

disadvantage 1 .....

.....

disadvantage 2 .....

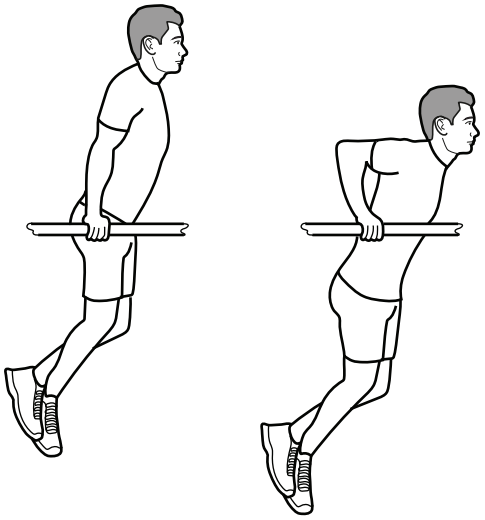
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[4]

[Total: 14]

9 The diagrams show a performer completing the downward phase of a dip on parallel bars.

diagram **A** diagram **B**



Describe the named type of isotonic muscle contraction of the triceps being used in the movement from diagram **A** to diagram **B**.

muscle contraction .....

description .....

.....

[2]

10 If a performer does not drink enough fluids, dehydration can occur.

Describe **three** effects of dehydration on a performer.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

11 The diagrams show a sprinter starting a sprint race. Different joints are labelled.

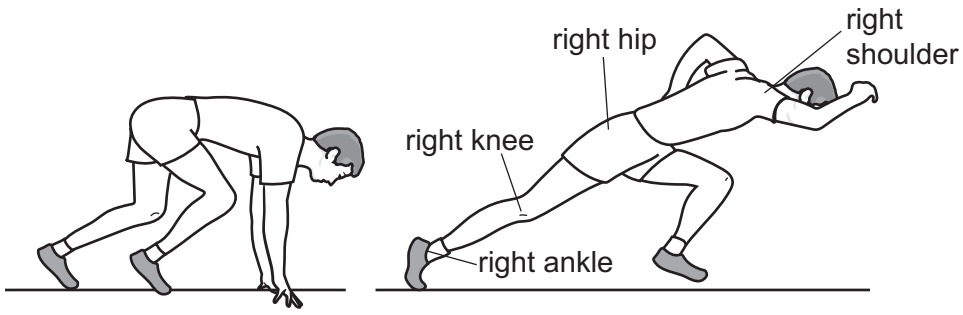


diagram **A** diagram **B**

(a) Complete the table to identify the type of movement at each labelled joint from diagram **A** to diagram **B** and the agonist muscle causing each movement.

joint	type of movement	agonist muscle
right shoulder		deltoid
right hip	extension	
right knee	extension	
right ankle		

[5]

(b) Describe the role of tendons.

.....

..... [1]

[Total: 6]

12 Access to facilities can be a barrier to participation in physical activities for performers with a disability.

(a) Identify **two** other barriers that can affect participation of performers with a disability. Suggest a strategy to overcome each barrier named.

barrier 1 .....

strategy .....

.....

barrier 2 .....

strategy .....

.....

[4]

(b) The Paralympics is a global event for performers with disabilities.

Outline some advantages of being a host nation of a global event.

.....

.....

.....

.....

.....

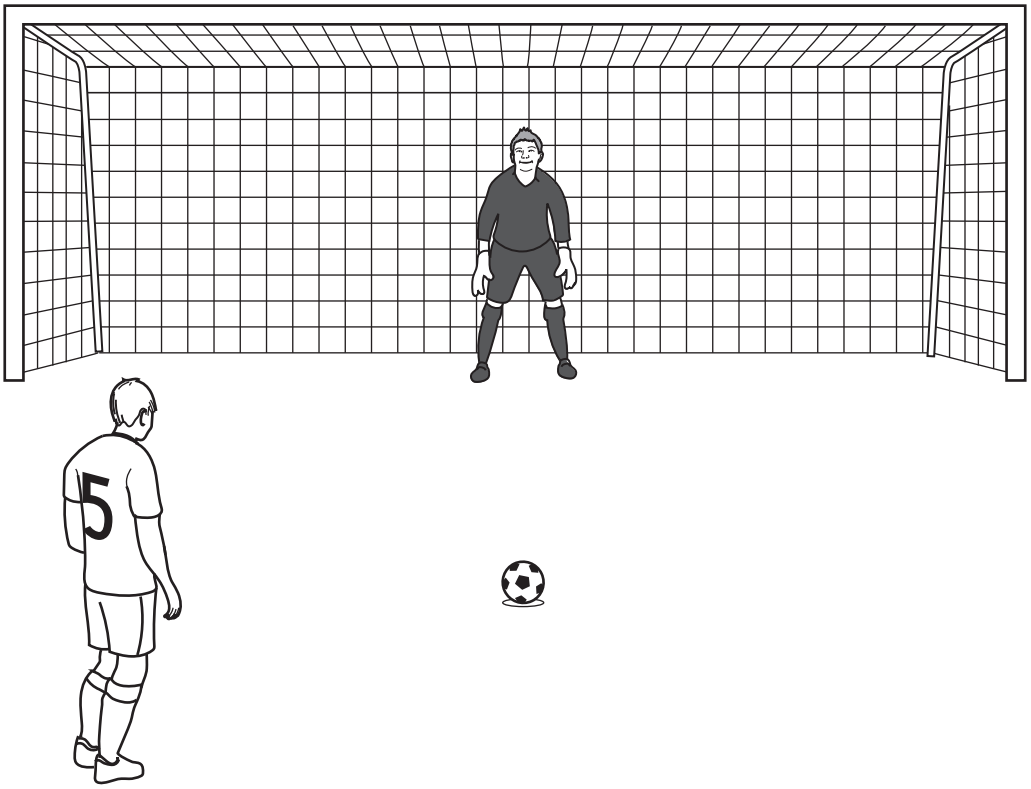
.....

.....

..... [4]

[Total: 8]

13 The diagram shows a player about to take a penalty kick in association football.



(a) Explain how each of the following stages of the information processing model are used by the player when taking the penalty kick:

input .....

.....

decision-making .....

.....

output .....

.....

feedback. .....

.....

[4]

(b) Explain **two** differences between short-term memory and long-term memory.

1 .....

.....

2 .....

.....

[2]

[Total: 6]

14 (a) A coach may test the fitness levels of a cross-country runner to see if the performer is suitable for the activity.

Describe **two** other reasons for testing the fitness levels of a performer.

1 .....

.....

2 .....

.....

[2]

(b) Before every training session the cross-country runner completes a warm up which may reduce the risk of injury.

Describe **two** other ways the cross-country runner could reduce the risk of injury.

1 .....

.....

2 .....

.....

[2]

(c) A cross-country runner may use continuous training as their main method of training.

Explain **two** advantages for a cross-country runner of using continuous training.

.....

.....

.....

..... [2]

[Total: 6]

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