



Cambridge IGCSE™

CANDIDATE
NAME

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--



PHYSICAL EDUCATION

0413/13

Paper 1 Theory

May/June 2021

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

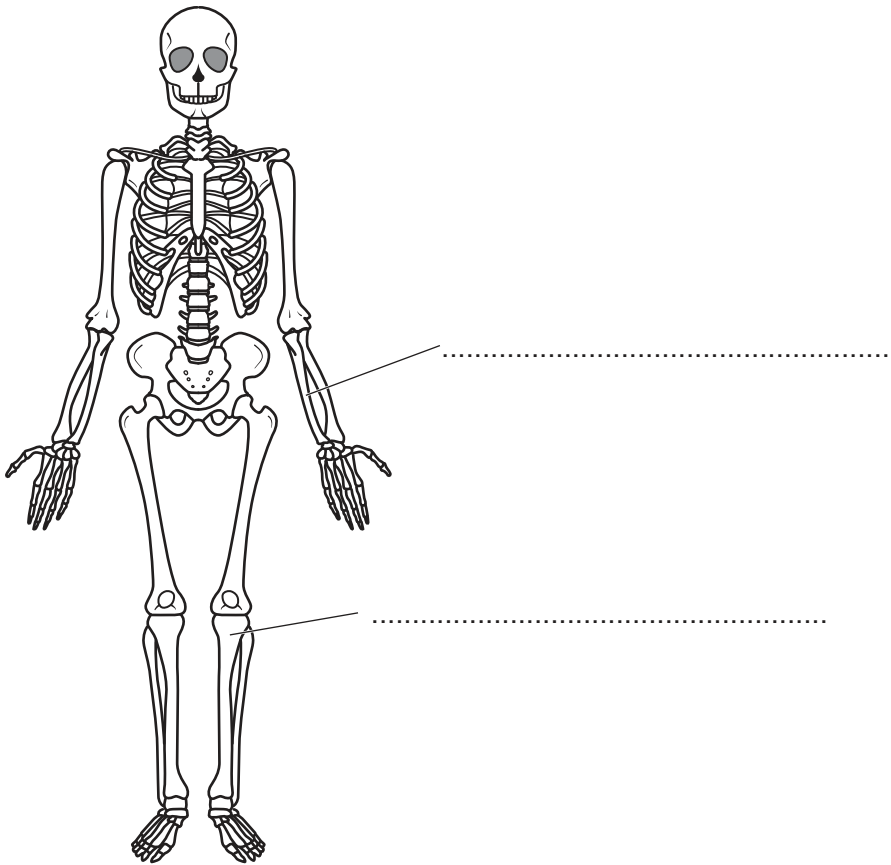
- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction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

1 (a) Identify the **two** bones labelled in the diagram.



[2]

(b) Some bones are classified as flat bones.

State a different classification that can be used for bones.

..... [1]

(c) State **two** functions of the skeleton.

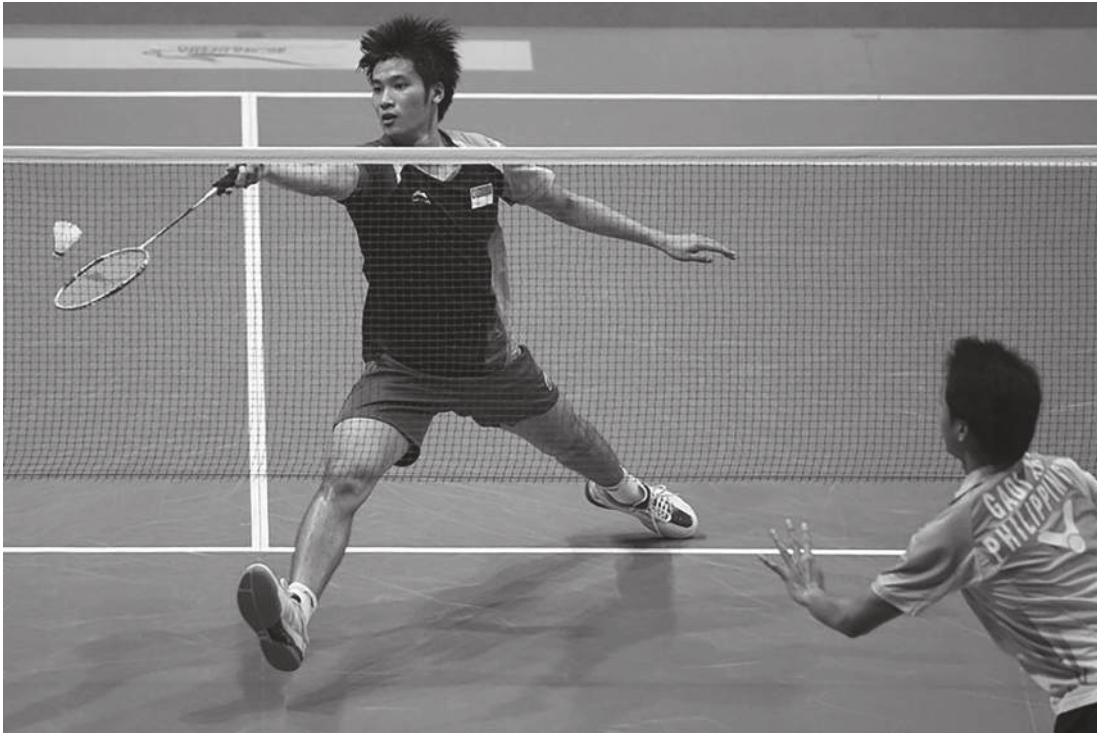
1

2

[2]

[Total: 5]

2 The photograph shows a badminton match.



A coach wishes to improve the performance of a badminton player.

(a) Describe a named test that the coach would use to assess the player's agility.

name of test

description

.....

.....

.....

.....

.....

.....

[4]

(b) Explain the importance of **three** named components of fitness, other than agility, for a badminton player.

component 1

explanation

.....

component 2

explanation

.....

component 3

explanation

.....

[6]

(c) Suggest **three** reasons why a coach might test a player's fitness.

1

.....

2

.....

3

.....

[3]

[Total: 13]

- 3 Describe a different characteristic of a performer at each of the **three** named stages of learning.
- stage 1
- characteristic
-
- stage 2
- characteristic
-
- stage 3
- characteristic
-
- [6]

- 4 (a) The photographs show **three** different physical activities.

hockey



gymnastics



rock climbing



- (i) Describe different potential **causes** of injury in each activity.

- hockey
-
- gymnastics
-
- rock climbing
-
- [3]

- (ii) Complete the table to identify **three** different types of injury that can occur and a different appropriate treatment for each type of injury.

type of injury	appropriate treatment

[6]

- (b) Explain each of the following terms:

real risk

.....

perceived risk.

.....

[2]

- (c) Suggest a different strategy that may be used to reduce the risk of injury in each of the following physical activities:

hockey

.....

gymnastics

.....

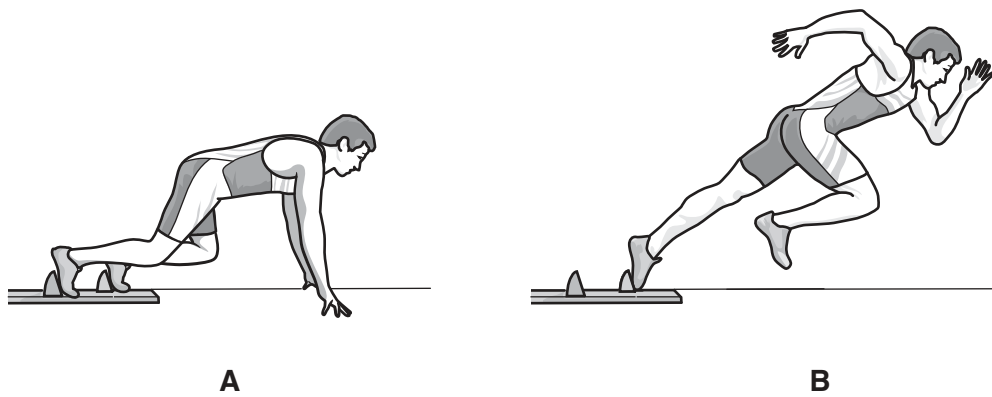
rock climbing.

.....

[3]

[Total: 14]

5 The diagrams show a sprinter as they leave the blocks at the start of a race.



(a) Complete the table for the sprinter when moving from position A to position B.

	joint type	type of movement	agonist muscle	antagonist muscle
left knee	hinge	extension	quadriceps	
right hip		flexion	hip flexors	
left ankle	hinge			tibialis anterior

[5]

(b) Name the main muscle fibre type used when sprinting. Justify your answer.

muscle fibre type

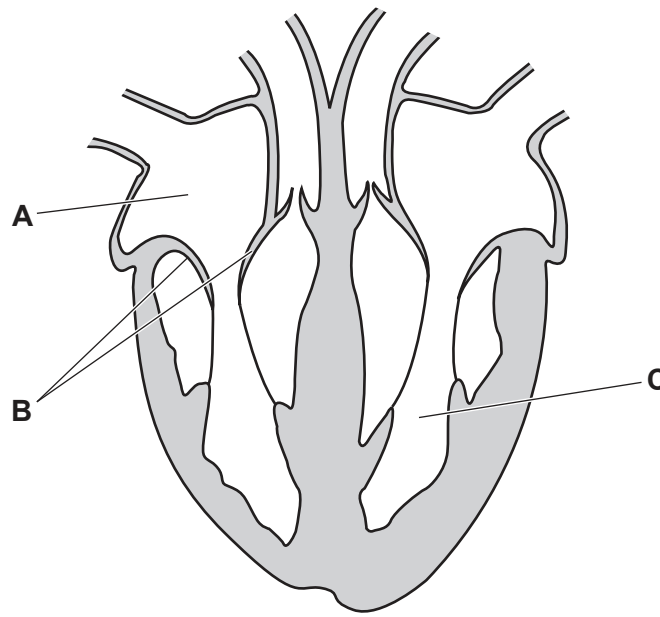
justification

.....

[2]

[Total: 7]

6 The diagram shows the heart with structures labelled **A**, **B** and **C**.



(a) Identify the structures labelled **A**, **B**, and **C**.

A

B

C [3]

(b) Describe the function of structure **B** and the function of structure **C**.

function of structure **B**

.....

function of structure **C**

..... [2]

(c) State **two** characteristics of veins.

1

.....

2

..... [2]

[Total: 7]

7 (a) Describe the difference between skill and ability.

.....
.....
.....
..... [2]

(b) Describe, using examples from a named physical activity, how **two** named characteristics of a skilled performance can be demonstrated by the performer.

physical activity

characteristic 1

example

.....

characteristic 2

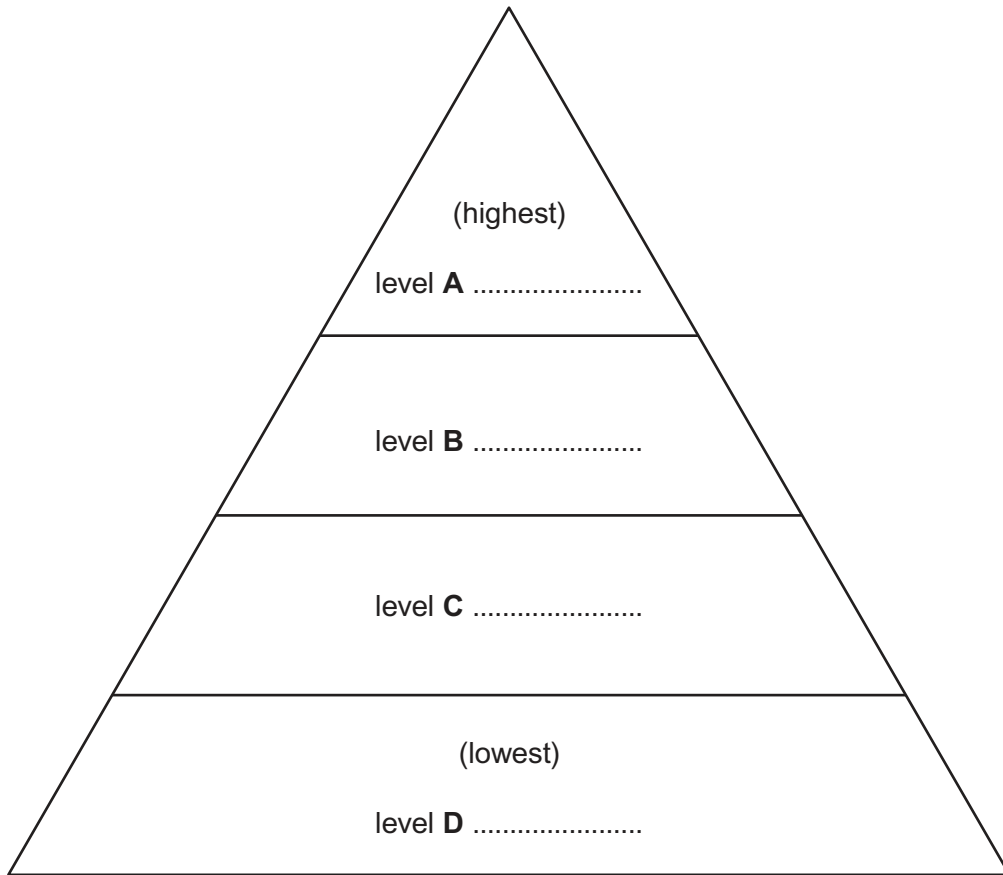
example

..... [4]

[Total: 6]

8 The characteristics of each level of sports development are often displayed in a pyramid.

(a) Identify the **four** levels on the diagram of the pyramid.



[4]

(b) Describe **two** characteristics of the highest level (level **A**) of the sports development pyramid and **two** characteristics of the lowest level (level **D**) of the sports development pyramid.

highest level (level **A**)

1

.....

2

.....

lowest level (level **D**)

1

.....

2

.....

[4]

[Total: 8]

10 (a) Define *sportsmanship* and *gamesmanship*.

sportsmanship

.....

gamesmanship

.....

[2]

(b) Describe, using a named physical activity, an example of sportsmanship and an example of gamesmanship.

physical activity

example of sportsmanship

.....

example of gamesmanship

.....

[2]

(c) Suggest **three** reasons, other than to enhance performance, why performers may choose to take prohibited performance-enhancing drugs (PEDs).

1

.....

2

.....

3

.....

[3]

[Total: 7]

12 (a) Explain the process of inspiration at rest.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

(b) Describe what is meant by the following terms:

vital capacity

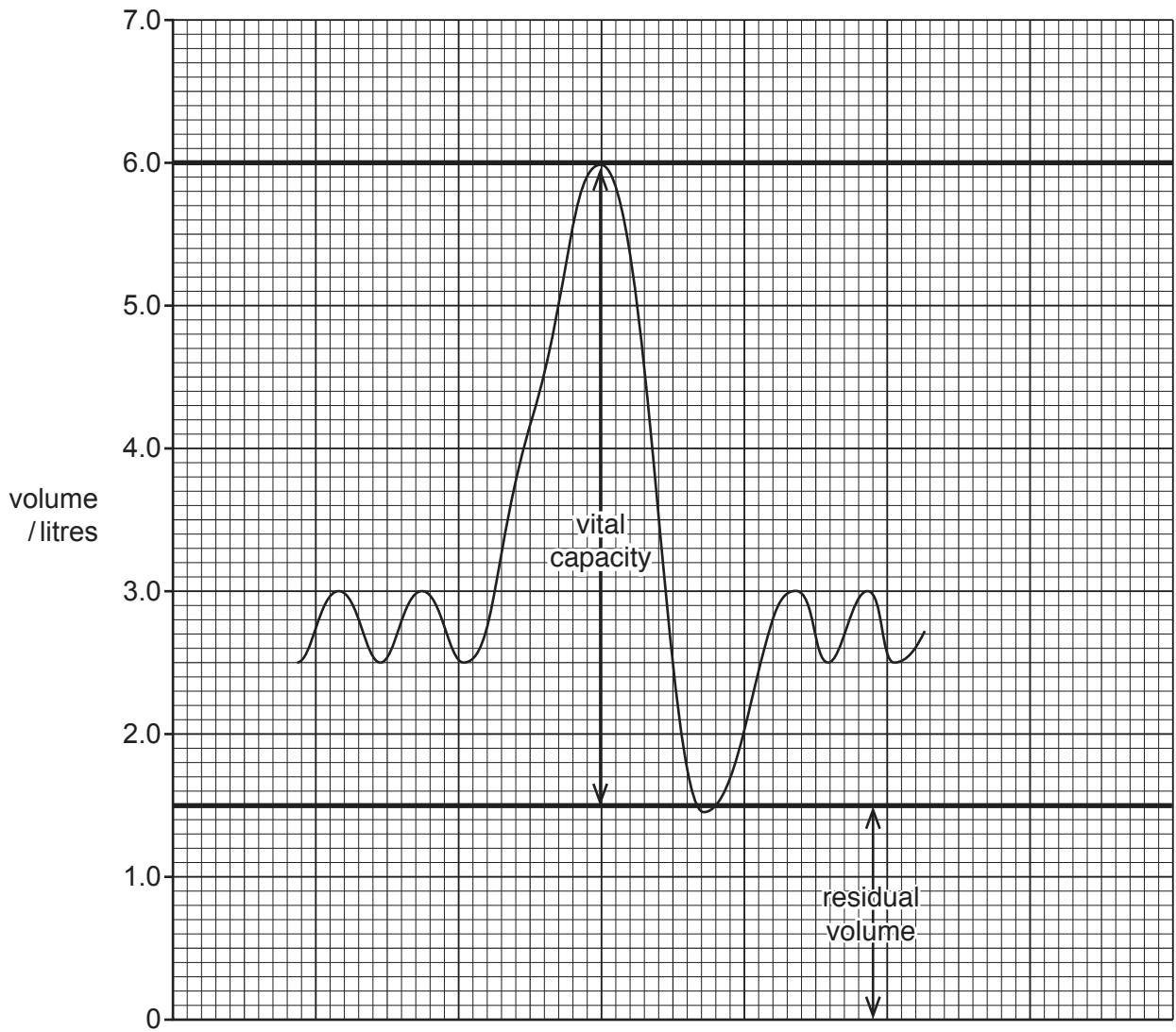
.....

residual volume.

.....

..... [2]

(c) The diagram shows different breathing volumes.



Calculate, using the diagram, the volume of the vital capacity.

..... litres [1]

- (d) The table shows values for breathing rate, tidal volume and minute ventilation at rest and during exercise for a different performer.

Calculate the missing values using the information in the table.

	at rest	during exercise
breathing rate	12 breaths per minute	30 breaths per minute
tidal volume		3 litres
minute ventilation	6 litres per minute	

[2]

[Total: 9]

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 the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.