Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

6376903615

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.

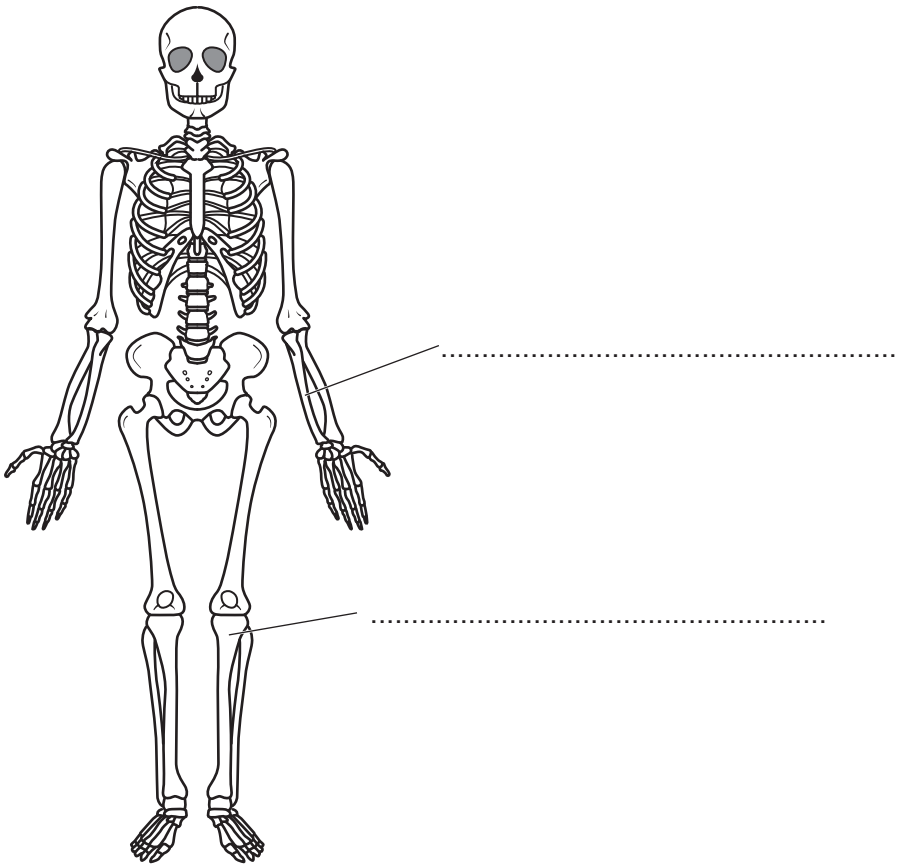
INFORMATION

- 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.

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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.

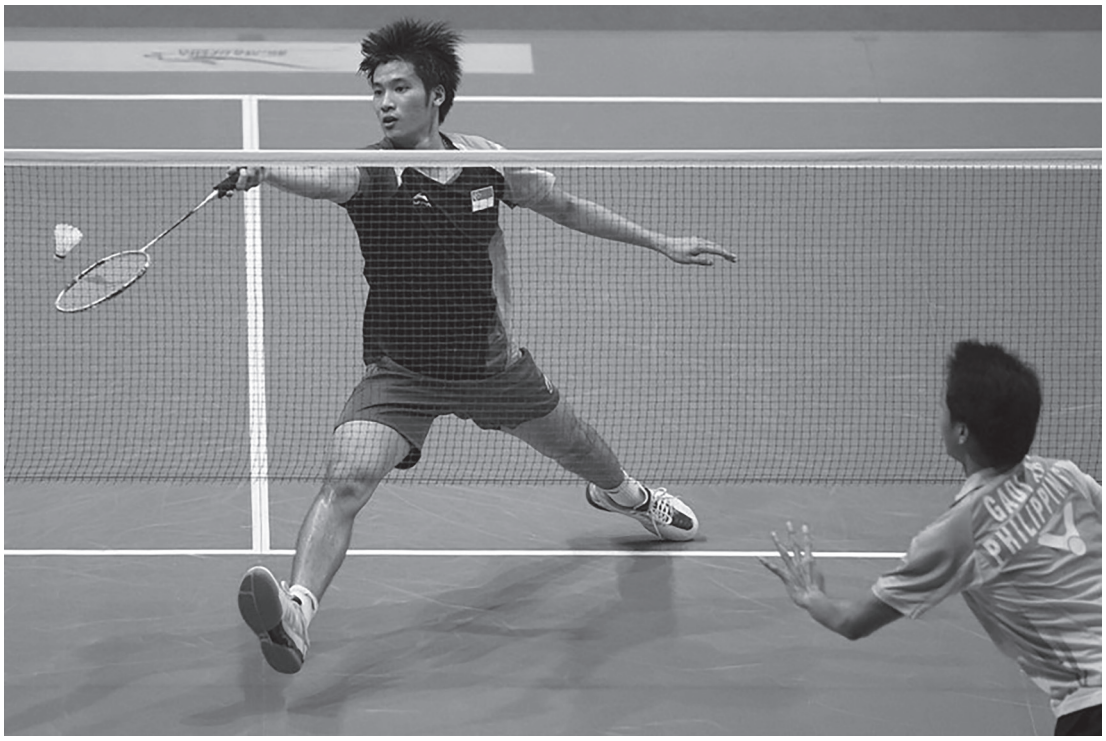
1 .....

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 .....

.....

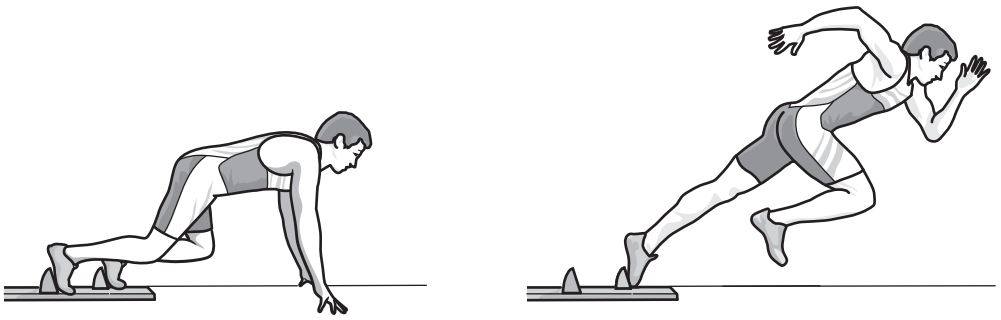
rock climbing. .....

.....

[3]

[Total: 14]

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



A **B**

(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 .....

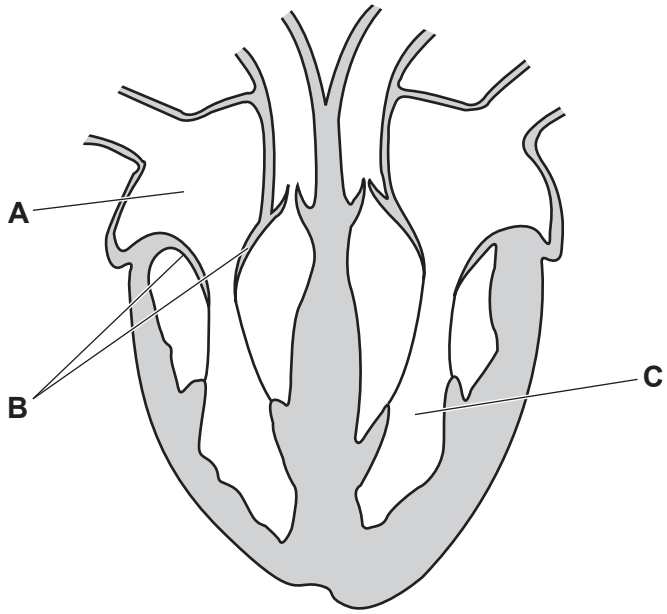
justification .....

.....

[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]

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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 .....

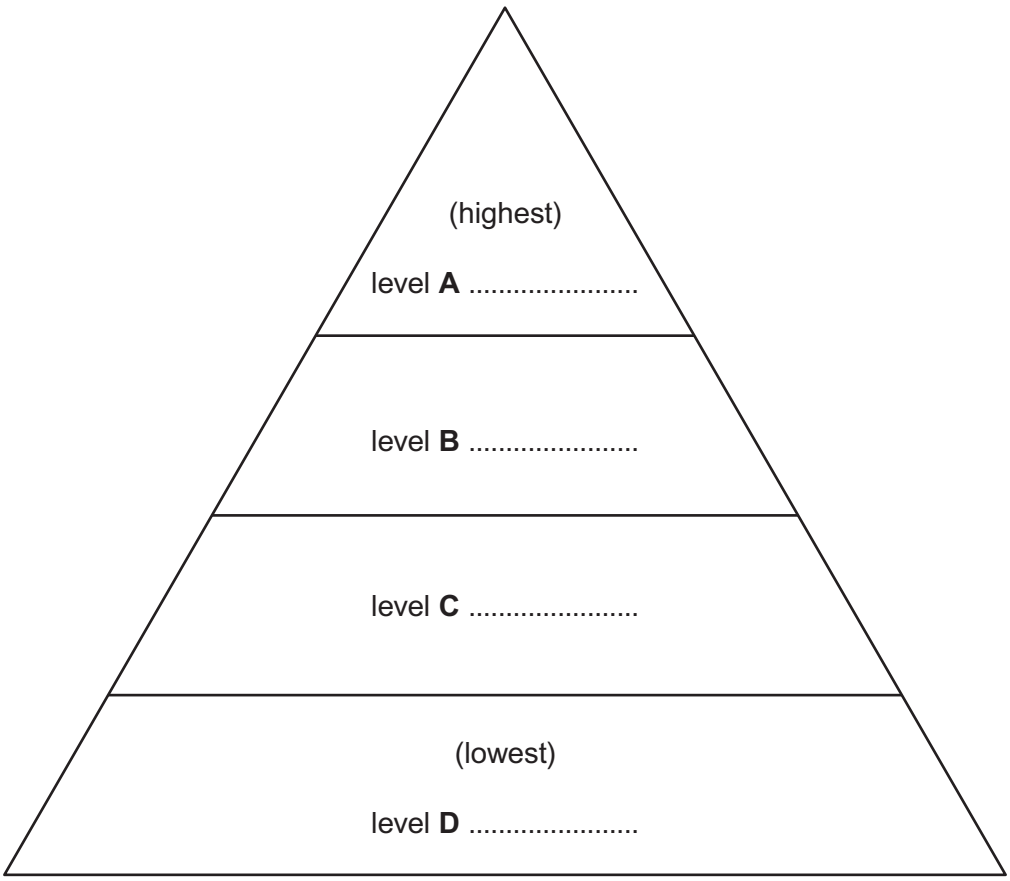
.....

[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]

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9 Sarah is a wheelchair user and would like to participate in physical activity at a local leisure facility.

(a) State **four** factors, other than disability, that might limit Sarah's participation.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

(b) Describe strategies a leisure facility could use to assist Sarah's participation.

.....

.....

.....

.....

.....

.....

.....

..... [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]

11 (a) Explain the advantages of sponsorship for a performer.

.....

.....

.....

.....

.....

.....

.....

..... [4]

(b) Suggest **three** disadvantages of media coverage for each of the following:

sport

disadvantage 1 .....

.....

disadvantage 2 .....

.....

disadvantage 3 .....

.....

performers.

disadvantage 1 .....

.....

disadvantage 2 .....

.....

disadvantage 3 .....

.....

[6]

[Total: 10]

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

.....

.....

.....

.....

.....

.....

.....

..... [4]

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

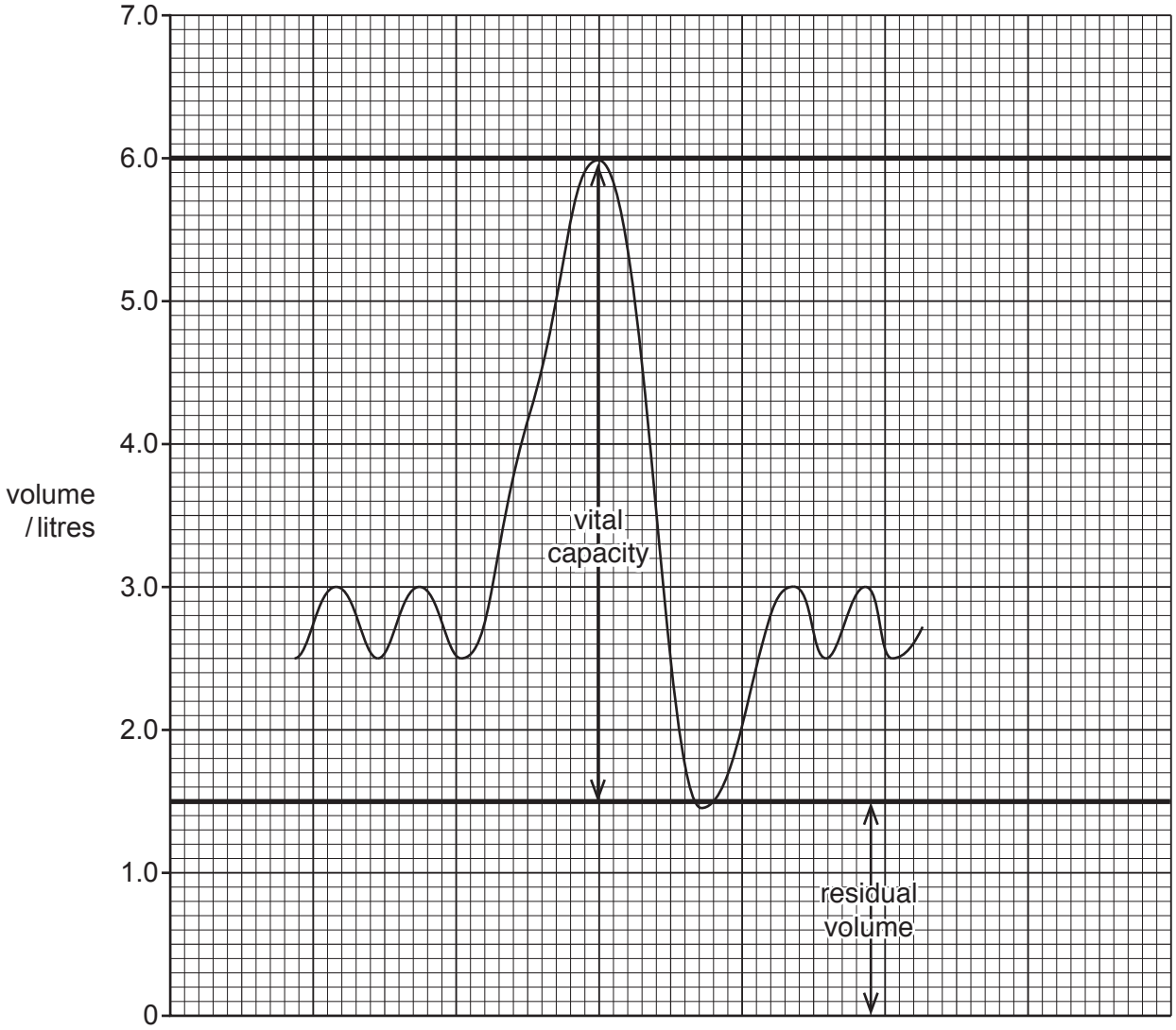
vital capacity .....

.....

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]

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