Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER				

1222446 7

PHYSICAL EDUCATION **0413/12**

Paper 1 Theory **October/November 2020**

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. Blank pages are indicated.

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1 Identify a different component of blood that has each of the following main functions:

combines with oxygen .....

clots blood. .....
[2]

2 State **two** personality types. Suggest a different physical activity usually performed by each personality type. Justify your answers.

personality type 1 .....

physical activity .....

justification .....

.....

personality type 2 .....

physical activity .....

justification .....

.....
[4]

3 The photographs show three different activities that receive global media coverage.

tennis

cycling

javelin throwing

(a) Describe how technology has brought about a different improvement in each activity.

tennis .....

.....

cycling .....

.....

javelin throwing .....

.....
[3]

(b) Describe **three** different ways that the internet and social media may benefit performers.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(c) Describe **two** advantages and **two** disadvantages of increased media coverage for people who watch global sporting events.

advantage 1 .....

.....

advantage 2 .....

.....

disadvantage 1 .....

.....

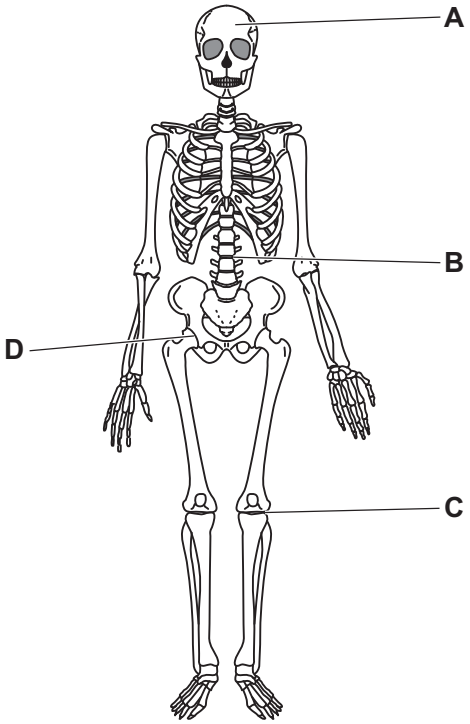
disadvantage 2 .....

.....

[4]

[Total: 10]

4 The diagram shows the human skeleton with different joint types labelled **A**, **B**, **C** and **D**.



(a) Name the joint type at **A**, **B** and **C**.

joint type at **A** .....

joint type at **B** .....

joint type at **C** .....

[3]

(b) Name **two** bones that form the joint labelled **C**.

1 .....

2 .....

[2]

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(c) Describe different functions of **three** named components of the joint type found at both **C** and **D**.

component 1 .....

function .....

.....

component 2 .....

function .....

.....

component 3 .....

function .....

.....
[6]

(d) Describe the difference between the joints labelled **C** and **D** in terms of their range of movement and stability.

.....

.....

.....

..... [2]

[Total: 13]

5 Describe, using **two** examples, how taking part in regular physical activity can improve a person's social health and well-being.

1 .....

.....

2 .....

.....
[2]

6 The photograph shows a swimming stroke, which can be classified as a closed skill.

(a) Explain why this skill can be classified as a closed skill on the open–closed continuum.

.....

.....

.....

..... [2]

(b) Classify this skill on **two** other named continua.
Justify each of your answers.

continuum 1 .....

classification .....

justification .....

.....

continuum 2 .....

classification .....

justification .....

.....
[4]

[Total: 6]

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7 **(a)** Suggest **three** factors that may influence whether a young performer participates in a physical activity.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(b) Describe examples of **two** named characteristics of a skilled performance in a named physical activity.

physical activity .....

characteristic 1 .....

example .....

.....

characteristic 2 .....

example .....

.....

[4]

(c) Identify, using examples from **one** named physical activity, how **two** named types of guidance could be used to develop skilled performance.

physical activity .....

type of guidance 1 .....

example .....

.....

type of guidance 2 .....

example .....

.....

[4]

[Total: 11]

8 **(a)** Describe the **three** phases of a warm up.

phase 1 .....

.....

phase 2 .....

.....

phase 3 .....

.....
[3]

(b) Using a named physical activity, describe a suitable exercise for each phase of a warm up.

physical activity .....

phase 1 .....

.....

phase 2 .....

.....

phase 3 .....

.....
[3]

(c) Suggest **two** different psychological benefits that a cool down can provide for a performer.

1 .....

.....

2 .....

.....
[2]

[Total: 8]

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9 **(a)** **(i)** State a different food source rich in each of the following nutrients:

carbohydrates .....

proteins .....

fats. .....
[3]

(ii) Suggest a physical activity that might require a performer to have a diet rich in protein. Describe **three** examples of how having extra protein can benefit performance in this activity.

physical activity .....

1 .....

.....

2 .....

.....

3 .....

.....
[3]

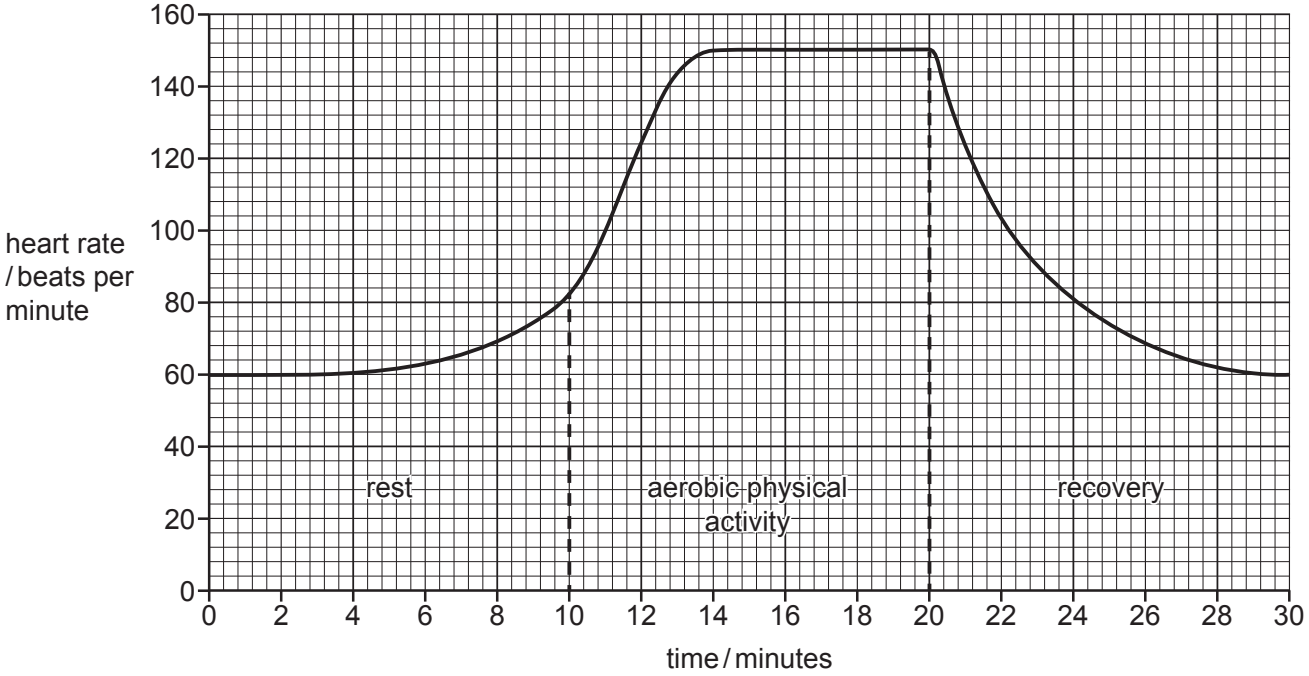
(b) State what happens to a performer when energy input exceeds energy output.

.....

..... [1]

[Total: 7]

10 **(a)** The graph shows the heart rate of a performer during a period of rest, during a period of aerobic physical activity and during a period of recovery.



(i) Calculate the duration of the aerobic physical activity.

..... [1]

(ii) State the highest heart rate shown on the graph.

..... [1]

(b) One short-term effect of exercise on the performer is an increase in heart rate.

State and explain **two** other short-term effects of exercise on the performer.

1 .....

.....

.....

.....

2 .....

.....

.....

.....

[4]

(c) Explain **four** factors that may affect the recovery time of the performer after the period of aerobic physical activity.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

[Total: 10]

11 **(a)** Describe how the feedback used by a performer at the cognitive stage of learning differs from the feedback used by a performer at the autonomous stage of learning.

.....

.....

.....

..... [2]

(b) Anxiety can cause a reduction in performance.

Describe **two** causes of anxiety in a named physical activity.

physical activity .....

1 .....

.....

2 .....

.....
[2]

[Total: 4]

12 **(a)** Describe what is meant by residual volume.

.....

..... [1]

(b) Explain the functions of **two** named muscles involved in normal breathing.

muscle 1 .....

explanation .....

.....

.....

muscle 2 .....

explanation .....

.....

.....
[4]

(c) Explain **three** characteristics of the alveoli that enable gaseous exchange to take place.

1 .....

.....

.....

.....

2 .....

.....

.....

.....

3 .....

.....

.....

.....
[6]

[Total: 11]

13 The photograph shows a group sailing, which is an outdoor and adventurous activity with some level of risk.

(a) Explain the terms *real risk* and *perceived risk*.

real risk .....

.....

perceived risk .....

.....

[2]

(b) Complete the table to suggest different strategies to reduce each risk.

risk	strategy to reduce risk
boat capsizes causing the performers to fall into the water	
injury while sailing	
collisions with other boats	

[3]

[Total: 5]

14 A performer joins a running club to improve their fitness in preparation to run in a local long-distance race. Before the performer takes part in a training programme a coach tests their cardiovascular endurance.

(a) Name and describe a test to measure the cardiovascular endurance of the performer.

name of test .....

description .....

.....

.....

.....

.....

.....

.....

.....
[4]

(b) Continuous training is a suitable method of training for improving cardiovascular endurance.

State **one** advantage and **one** disadvantage of continuous training.

advantage .....

disadvantage .....
[2]

(c) Suggest why the performer may also wish to improve their speed.

.....

..... [1]

[Total: 7]

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