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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.

- 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]

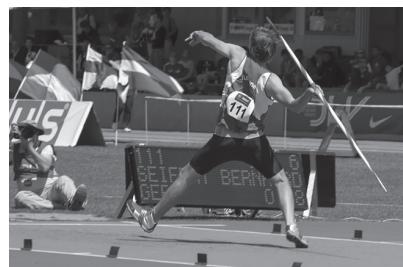
- 3 The photographs show three different activities that receive global media coverage.



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

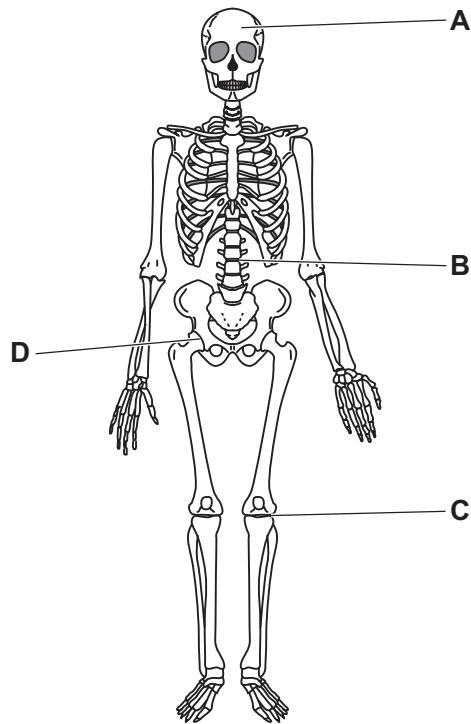
.....
disadvantage 1

.....
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]

- (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]

- 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]

- 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]

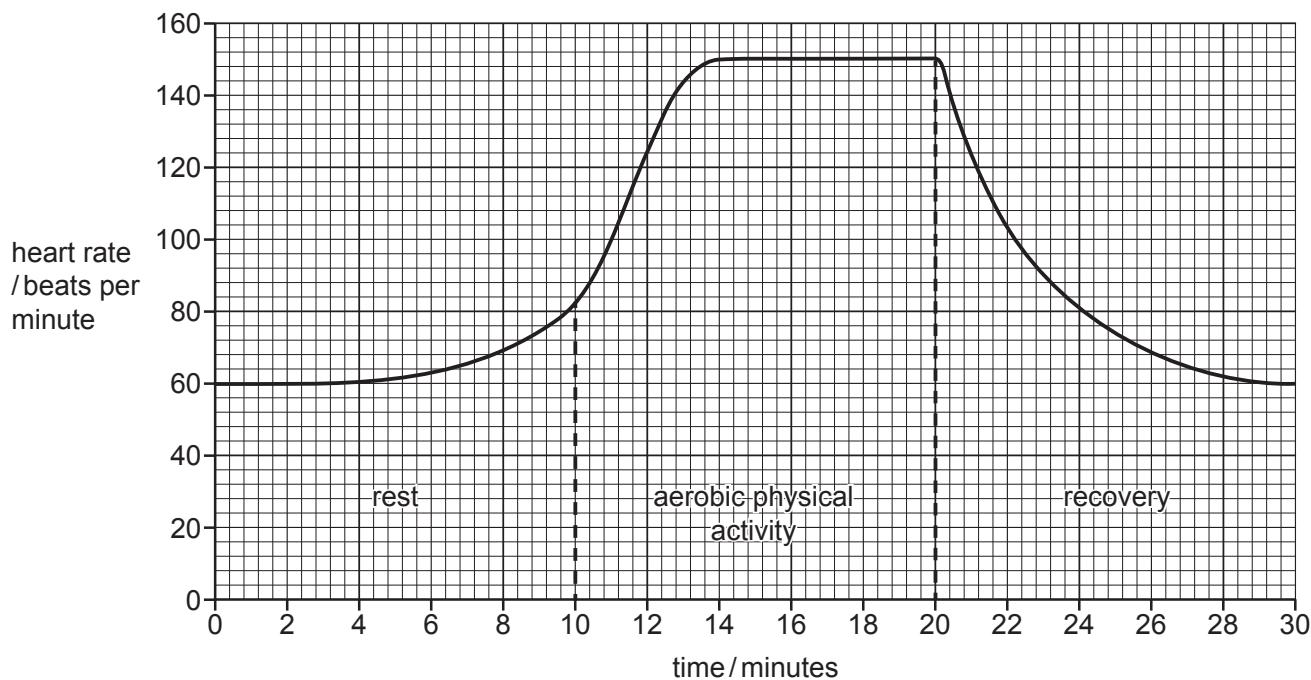
- (b) State what happens to a performer when energy input exceeds energy output.

.....

[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

.....

.....

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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