Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

0676294267

PHYSICAL EDUCATION **0413/11**

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 **20** pages. Blank pages are indicated.

[Turn over

1 State **two** muscle fibre types.

1 .....

2 .....
[2]

2 **(a)** Name a global sporting event.

..... [1]

(b) Describe the advantages of being the host nation of a global event.

.....

.....

.....

.....

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.....

.....

.....

.....

..... [5]

[Total: 6]

3 **(a)** Describe examples of mechanical guidance in **two** different physical activities.

physical activity 1 .....

example 1 .....

.....

physical activity 2 .....

example 2 .....

.....

[2]

(b) **(i)** Identify the first stage and the final stage of learning.

first stage .....

final stage .....

[2]

(ii) Suggest how the way a coach gives feedback may differ between performers in the first stage of learning and performers in the final stage of learning.

.....

.....

.....

.....

.....

..... [3]

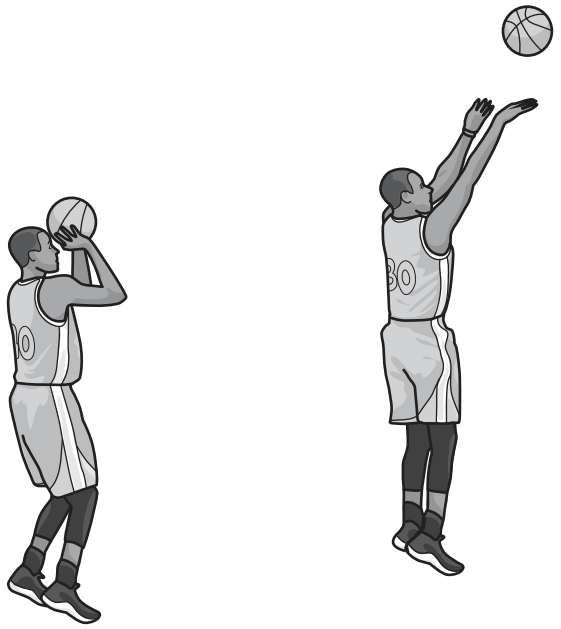
(iii) State how intrinsic feedback benefits a performer in the final stage of learning.

.....

..... [1]

[Total: 8]

4 **(a)** The diagrams show a basketball player at different stages of shooting.



A **B**

(i) State the type of movement that occurs from diagram **A** to diagram **B** at each of the following joints:

shoulder joint .....

elbow joint. .....
[2]

(ii) Describe the antagonistic muscle action that creates the type of movement occurring at the elbow joint from diagram **A** to diagram **B**.

.....

.....

.....

.....

.....

.....

.....

..... [4]

(b) (i) Name the type of synovial joint at each of the following:

shoulder joint .....

elbow joint. .....

[2]

(ii) Name **three** components of a synovial joint and describe a different function of each component.

component 1 .....

function .....

.....

component 2 .....

function .....

.....

component 3 .....

function .....

.....

[6]

[Total: 14]

5 **(a)** The equation summarises how energy is released by aerobic respiration.

A + oxygen ⟶ **B** + water

Name substances **A** and **B**.

A .....

B .....

[2]

(b) Name **one** physical activity that uses mainly aerobic respiration and **one** physical activity that uses mainly anaerobic respiration. Give **two** justifications for each physical activity.

mainly aerobic respiration

physical activity .....

justification 1 .....

.....

justification 2 .....

.....

mainly anaerobic respiration

physical activity .....

justification 1 .....

.....

justification 2 .....

.....

[4]

[Total: 6]

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6 **(a)** The photograph shows a table tennis player.

(i) Describe how each of the following stages of information processing affect the movements made by the player:

input .....

.....

decision making .....

.....

feedback. .....

.....

[3]

(ii) Explain the concept of the single-channel hypothesis and how it might affect the table tennis player.

.....

.....

.....

.....

.....

..... [2]

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

1 .....

.....

2 .....

.....

[2]

[Total: 7]

7 Describe **three** ways the recreational activities a young person takes part in may be influenced by their family.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

8 The table shows a training session for a performer trying to improve their fitness.

training session
warm up, followed by:
1 minute of jogging on the spot
1 minute of wall push-ups
1 minute of jumping jacks
1 minute of shuttle runs
1 minute of static cycling
1 minute of sit-ups
1 minute of leg raises
1 minute of walking lunges
1 minute of skipping with a rope
1 minute of rest then repeat the exercises
then cool down
Complete the training session once per week for 3 weeks.

(a) Identify the training method shown in the table.

..... [1]

(b) Suggest **two** reasons why this training method should benefit a performer trying to improve their fitness.

1 .....

.....

2 .....

.....

[2]

(c) Describe how **three** named principles of overload could be applied to the training programme shown.

principle 1 .....

application .....

.....

principle 2 .....

application .....

.....

principle 3 .....

application .....

.....

[6]

(d) State **three** dangers of overtraining for the performer.

1 .....

2 .....

3 .....

[3]

[Total: 12]

9 **(a)** Describe the role of each of the following structures in the pathway of blood through the heart:

vena cava .....

.....

pulmonary vein .....

.....

aorta .....

.....

pulmonary artery. .....

.....

[4]

(b) Describe **two** long-term effects of exercise on the heart.

1 .....

.....

2 .....

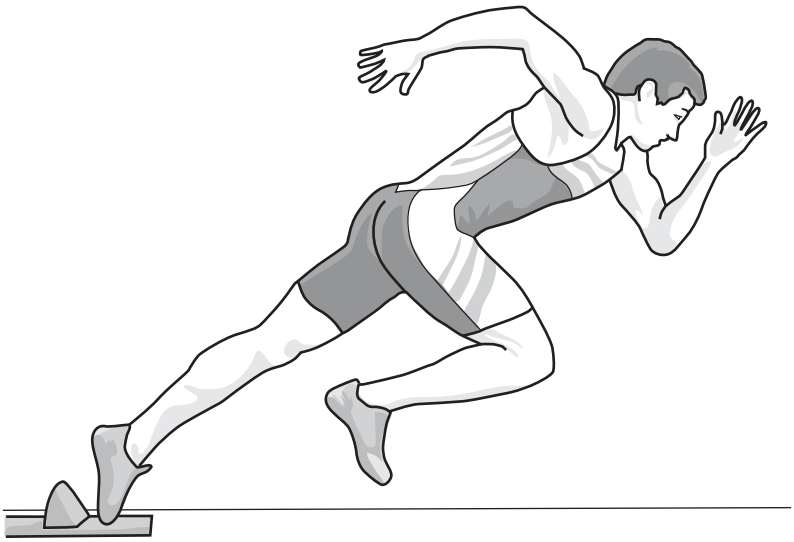
.....

[2]

[Total: 6]

10 **(a)** The diagram shows a sprinter at the start of a race.

(i) Draw an **X** on the diagram to show the location of a gastrocnemius muscle.



[1]

(ii) Identify **two** forces and explain how each force acts on the sprinter as they start the race.

force 1 .....

explanation .....

.....

force 2 .....

explanation .....

.....

[4]

(b) Describe **three** benefits for a sprinter of a warm up.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

[Total: 8]

11 Tendon injuries can occur when participating in physical activities.

(a) Describe **one** function of a tendon.

.....

..... [1]

(b) Describe **two** possible causes of a tendon injury during physical activity.

1 .....

.....

2 .....

.....

[2]

(c) The RICE method of treatment is often used to treat tendon injuries.

Describe a different benefit that each of the following parts of the RICE method provides:

rest .....

.....

ice .....

.....

compression. .....

.....

[3]

[Total: 6]

12 Complete the table to show different types of prohibited performance-enhancing drug (PED) and a different benefit of each type of PED on performance for each physical activity.

physical activity	type of PED	benefit on performance
shot put		
golf		
sprinting		

[6]

13 **(a)** Describe what is meant by the term *VO_2 max*.

.....

.....

.....

..... [2]

(b) The table shows the VO_2 max for some inactive people and for some performers in certain physical activities.

activity	inactive		distance runner		shot putter	
gender	male	female	male	female	male	female
VO_2 max / ml per kg per minute	56.0	40.4	76.5	68.0	56.0	41.0

(i) Identify the individual with the highest VO_2 max.

individual's gender .....

individual's activity .....
[1]

(ii) Suggest **one** reason why the inactive individuals and the shot putters have similar VO_2 max levels.

.....

..... [1]

(c) State **three** factors, other than gender, that affect VO_2 max levels.

1 .....

2 .....

3 .....
[3]

[Total: 7]

14 (a) Describe, from a named physical activity, examples of each of the following characteristics of a skilled performance.

physical activity .....

fluent .....

.....

consistent .....

.....

accurate .....

.....

goal-directed .....

.....

[4]

(b) Describe an example of an open skill and an example of a closed skill in a named physical activity.

physical activity .....

open skill .....

.....

closed skill .....

.....

[2]

[Total: 6]

15 SMARTER goals should be measurable.

(a) Name **two** other goal-setting principles.

1 .....

2 .....
[2]

(b) Give an example of a measurable goal in a named physical activity.

physical activity .....

example .....

.....
[1]

[Total: 3]

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