Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER | | | | | |

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3979237570

PHYSICAL EDUCATION **0413/13**

Paper 1 Theory **May/June 2022**

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. Any blank pages are indicated.

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1 **(a)** Identify the **two** bones in the lower leg located between the knee joint and the ankle joint.

.....

..... [2]

(b) **(i)** Identify the type of synovial joint located at the knee.

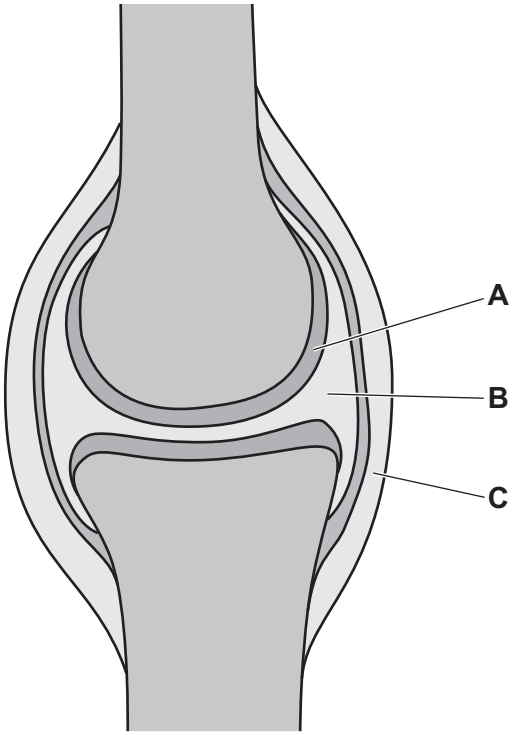
..... [1]

(ii) Identify **one** other type of synovial joint found in the body.

..... [1]

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(c) The diagram shows the structure of a typical synovial joint.



Identify the structural components labelled **A**, **B** and **C**. Describe a different function of each component.

A .....

function .....

.....

B .....

function .....

.....

C .....

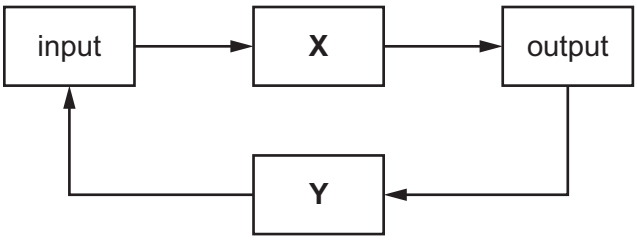
function .....

.....

[6]

[Total: 10]

2 The diagram below shows the stages in a simple information processing model.



(a) Identify stages **X** and **Y**.

X .....

Y .....
[2]

(b) Explain the differences between short-term memory and long-term memory.

.....

.....

.....

.....

.....

.....

.....

..... [4]

[Total: 6]

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3 **(a)** Define VO_2 max.

.....

..... [1]

(b) Describe how the following factors can affect an individual's VO_2 max level.

lifestyle .....

.....

.....

training .....

.....

.....
[2]

[Total: 3]

4 The acronym SMARTER represents the principles of goal-setting.

(a) Identify the principles of goal-setting represented by **S**, **M** and **T**.

Give an example of how each of these principles could be applied by a performer setting goals to improve their performance in **swimming**.

principle **S** .....

example .....

.....

principle **M** .....

example .....

.....

principle **T** .....

example .....

.....
[6]

(b) Suggest how goal-setting can be used as a means to control anxiety before a performance.

.....

.....

.....

..... [2]

[Total: 8]

5 **(a)** Identify **two** nutrients that can provide a performer with energy.

1 .....

2 .....

[2]

(b) Explain the differences between the nutrient requirements of a marathon runner and the nutrient requirements of a 200-metre sprinter.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]

[Total: 7]

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6 **(a)** Explain, using a named physical activity, how a performer can use the following principles of overload in their training programme.

physical activity .....

frequency .....

explanation .....

.....

intensity .....

explanation .....

.....

time .....

explanation .....

.....

type .....

explanation .....

.....

[4]

(b) Identify **two** dangers of overtraining.

1 .....

2 .....

[2]

[Total: 6]

7 Physical health and well-being is one component included in the World Health Organization's (WHO) definition of health.

Identify **one** other component from the definition and describe **three** aspects of that component.

component .....

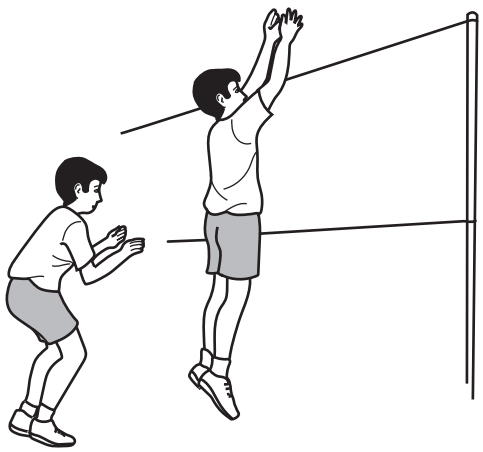
aspect 1.....

aspect 2.....

aspect 3.....

[4]

8 The diagram shows a volleyball player jumping to perform a block.



P **Q**

(a) Identify the type of movement occurring at the following joints as the performer moves from position **P** to position **Q**.

ankle .....

knee .....

shoulder .....

[3]

(b) Explain how a named force acts on the performer when moving from position **P** to position **Q**.

force .....

explanation .....

.....

[2]

(c) State the class of lever operating at the ankle between position **P** and position **Q**.

Draw and label this class of lever.

class of lever .....

[3]

(d) Identify **two** named components of fitness, other than flexibility, required by a volleyball player.

Explain how each of these components may benefit performance in a game of volleyball.

component 1 .....

benefit .....

.....

component 2 .....

benefit .....

.....

[4]

[Total: 12]

9 **(a)** Identify **two** types of sponsorship that can be given to a performer.

1 .....

.....

2 .....

.....

[2]

(b) Explain, using examples, how sponsorship can have a negative impact on sport.

.....

.....

.....

.....

.....

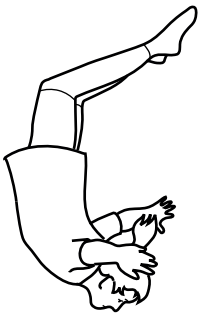
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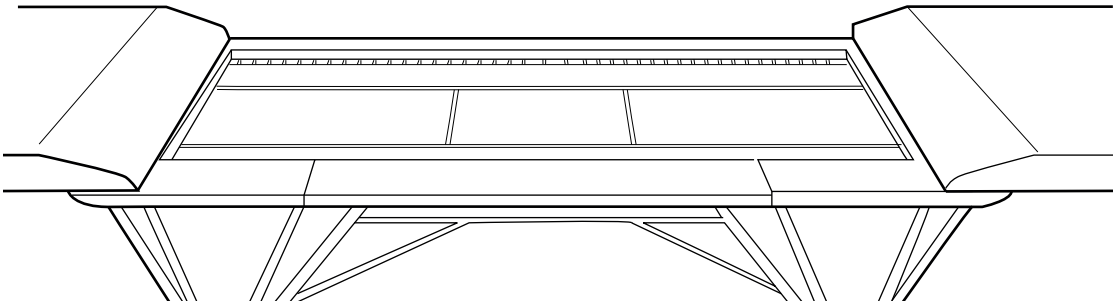
.....

..... [4]

[Total: 6]

10 The picture shows a trampolinist performing.





(a) (i) Describe an example of a real risk and an example of a perceived risk in trampolining.

real risk .....

.....

perceived risk .....

.....

[2]

(ii) Describe **three** strategies, other than the use of safety mats, to reduce the risk of injury during a trampoline session.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(b) Flexibility is one fitness component required by a trampolinist.

Describe how to carry out a named test of flexibility.

name of test .....

description .....

.....

.....

.....

.....

.....

[4]

[Total: 9]

11 Suggest strategies that could be used to increase the level of female participation in Association Football.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [6]

12 (a) Describe:

skill .....

.....

ability. .....

.....

[2]

(b) A skilled performance can be aesthetically pleasing.

Describe, using examples from a named physical activity, **two** other characteristics of a skilled performance.

physical activity .....

characteristic 1 .....

example .....

.....

characteristic 2 .....

example .....

.....

[4]

[Total: 6]

13 **(a)** Describe the function of **two** named components of blood.

component 1 .....

function .....

.....

component 2 .....

function .....

.....
[4]

(b) Explain why the cardiac output of a marathon runner may differ from the cardiac output of a sedentary person during exercise of the same intensity.

.....

.....

.....

.....

.....

.....

.....

..... [3]

[Total: 7]

14 (a) Identify **two** characteristics of the alveoli. Explain how each of these characteristics enables gaseous exchange to occur.

characteristic 1 .....

explanation .....

.....

.....

characteristic 2 .....

explanation .....

.....

.....

[4]

(b) Complete the table to identify and describe lung volumes and any change that occurs to each lung volume during exercise.

name of lung volume	description of lung volume	change in volume during exercise
	volume of air inhaled or exhaled per breath	increase
vital capacity		no change
	volume of air remaining in lungs following exhalation	
minute ventilation		

[6]

[Total: 10]

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