Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

1054267592

PHYSICAL EDUCATION **0413/11**

Paper 1 Theory **October/November 2019**

1 hour 45 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.
Electronic calculators may be used.
You may lose marks if you do not show your working or if you do not use appropriate units.

The number of marks is given in brackets [ ] at the end of each question or part question.
The total mark for this paper is 100.

This document consists of **17** printed pages and **3** blank pages.

© UCLES 2019

Cambridge Assessment International Education

[Turn over

1 State **two** types of blood vessel.

1 .....

2 .....

[2]

2 The photograph shows performers playing table tennis.



(a) Describe how **four** different components of fitness can benefit a performer when playing table tennis.

component of fitness 1 .....

.....

.....

component of fitness 2 .....

.....

.....

component of fitness 3 .....

.....

.....

component of fitness 4 .....

.....

.....

[4]

(b) Describe how to carry out **two** named fitness tests.

name of test 1 .....

description .....

.....

.....

.....

.....

.....

name of test 2 .....

description .....

.....

.....

.....

.....

.....

[6]

[Total: 10]

3 When kicking a ball flexion occurs at the knee.

Name the agonist and the antagonist in the upper leg during this movement.

agonist .....

antagonist .....
[2]

4 The Olympic Games is a global event that allows amateur performers and professional performers to compete against each other.

(a) Describe **two** disadvantages that amateur performers may have when competing against professional performers at the Olympic Games.

1 .....

.....

2 .....

.....
[2]

(b) Suggest how a nation might try to create a legacy after a global event.

.....

.....

.....

..... [2]

[Total: 4]

5 **(a)** Name **two** different types of prohibited performance-enhancing drug (PED).
Explain how each type of PED could give a different advantage in a named physical activity.

type of PED 1 .....

physical activity 1 .....

advantage 1 .....

.....

type of PED 2 .....

physical activity 2 .....

advantage 2 .....

.....
[6]

(b) Describe **one** type of test that could be used to detect the use of prohibited performance-enhancing drugs.

.....

..... [1]

(c) Describe **two** negative consequences of drugs scandals for sport.

1 .....

.....

2 .....

.....
[2]

[Total: 9]

6 **(a)** Identify the **three** phases of a warm up and describe a suitable activity for each phase in **one** named physical activity.

physical activity .....

phase 1 .....

.....

.....

.....

phase 2 .....

.....

.....

.....

phase 3 .....

.....

.....

.....

[6]

(b) Describe relaxation techniques that a performer might use during a warm up to control levels of arousal and anxiety.

.....

.....

.....

..... [2]

(c) Describe the physiological reasons why a performer would cool down.

.....

.....

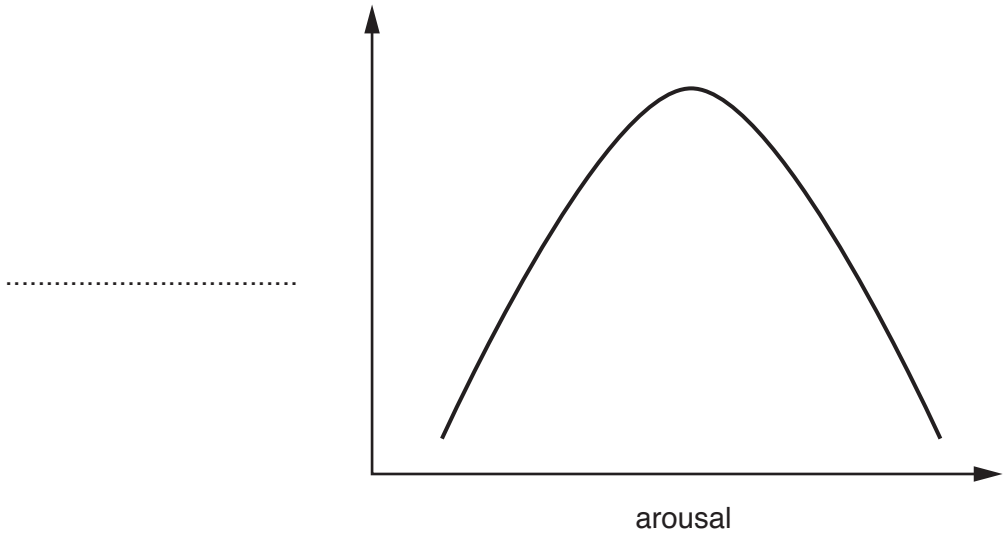
.....

..... [2]

[Total: 10]

© UCLES 2019

7 **(a)** The diagram shows the Inverted-U theory (Yerkes–Dodson law) with the vertical axis label missing.



(i) Label the vertical axis on the diagram. [1]

(ii) Add a label on the diagram to show the optimal level of arousal. [1]

(b) Using a named physical activity, explain why the optimal level of arousal varies for different skills.

physical activity .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]

[Total: 6]

© UCLES 2019

[Turn over

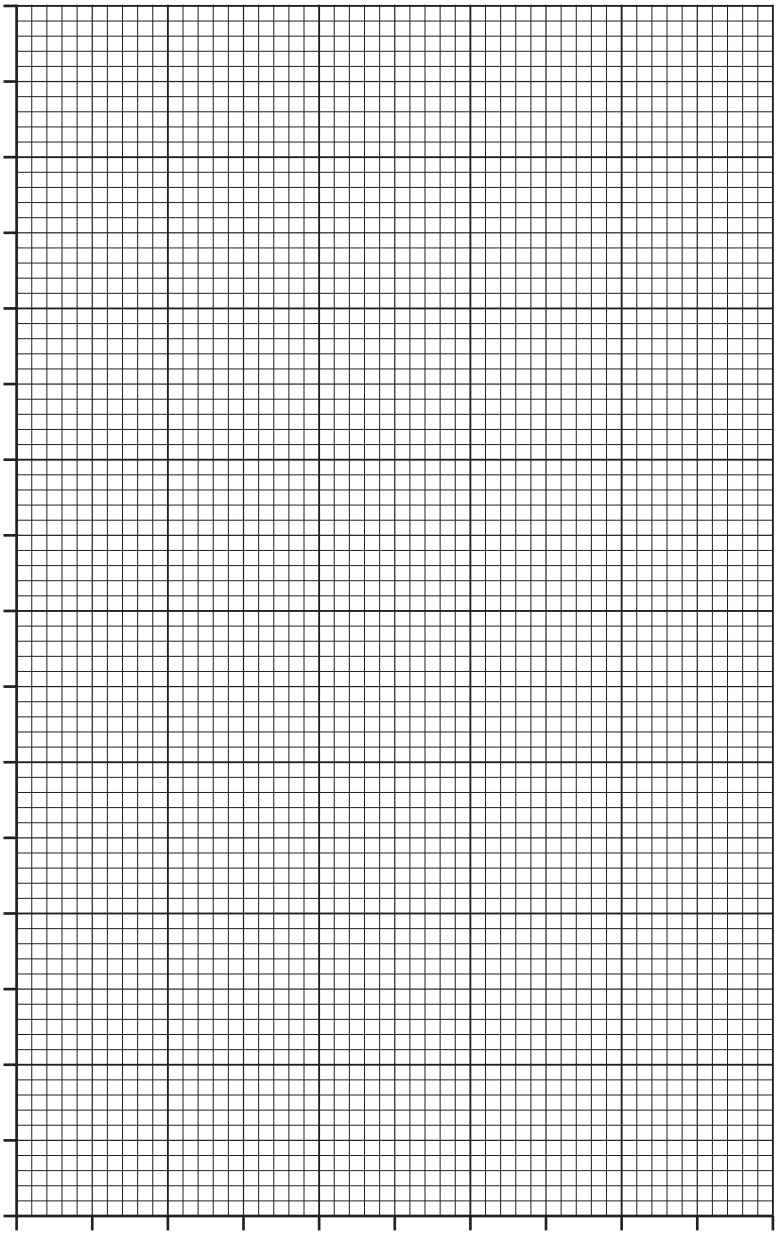
8 **(a)** The table shows typical VO_2 max values for performers in different physical activities measured in millilitres of oxygen per kilogram per minute.

physical activity	physical activity **X**	basketball	gymnastics	football	rowing
VO_2 max / ml per kg per minute	70	43	35	50	58

(i) Complete the bar chart using the information from the table. Complete both axes.

.....

.....



physical activity

[3]

(ii) Suggest a physical activity that might be represented by physical activity **X**.
Give **one** reason for your answer.

physical activity .....

reason .....

.....
[2]

(b) Describe how factors can affect a performer's VO_2 max.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]

[Total: 10]

9 Complete the table to classify each bone as either long, short or flat.

bone	classification
scapula	
femur	
carpal	

[3]

10 **(a)** State a different food source that is rich in each of the following nutrients:

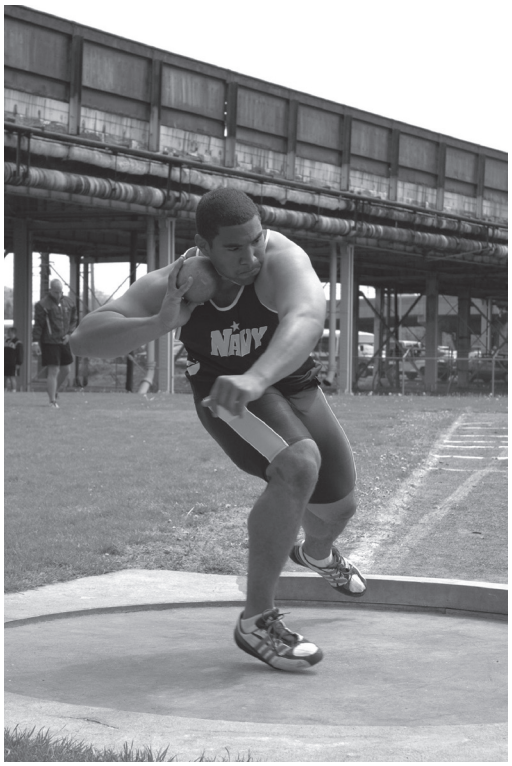
carbohydrates .....

proteins .....

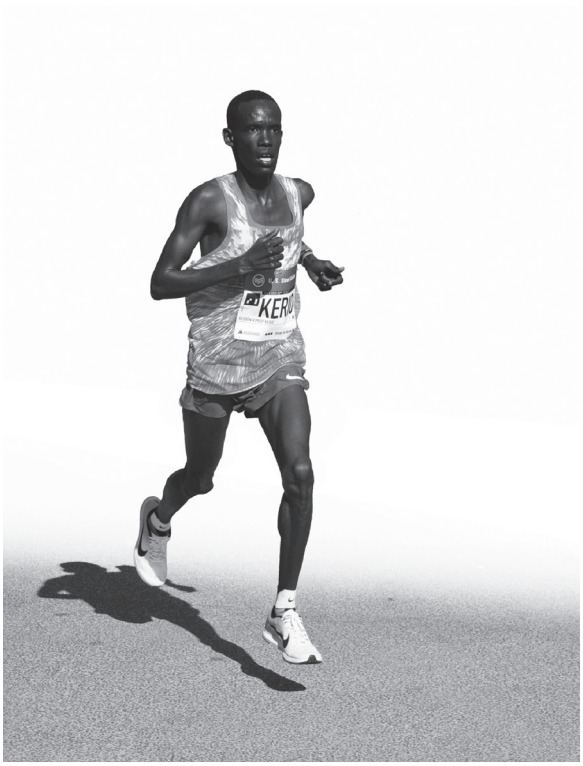
fats. .....

[3]

(b) The photographs show a shot putter and a long-distance runner.



A



B

Suggest reasons why the performers shown in photographs **A** and **B** may have different diets.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [6]

[Total: 9]

11 **(a)** Explain the term *cardiac output*.

.....

..... [1]

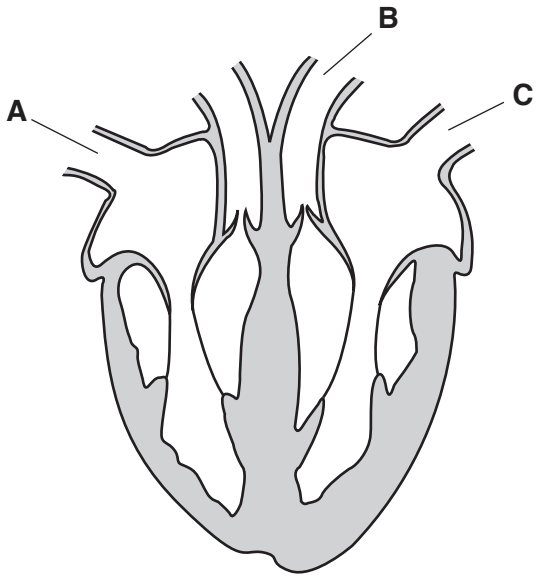
(b) Calculate the cardiac output of a performer who has a heart rate of 75 beats per minute and a stroke volume of 85 ml.

Show your working and give the unit.

cardiac output .....

unit .....
[3]

(c) The diagram shows the heart.



Name the structures labelled **A**, **B** and **C** and describe the pathway of blood through each structure.

structure **A** .....

description .....

.....

structure **B** .....

description .....

.....

structure **C** .....

description .....

.....

[6]

(d) Describe **three** long-term effects of exercise on the heart.

1 .....

.....

2 .....

.....

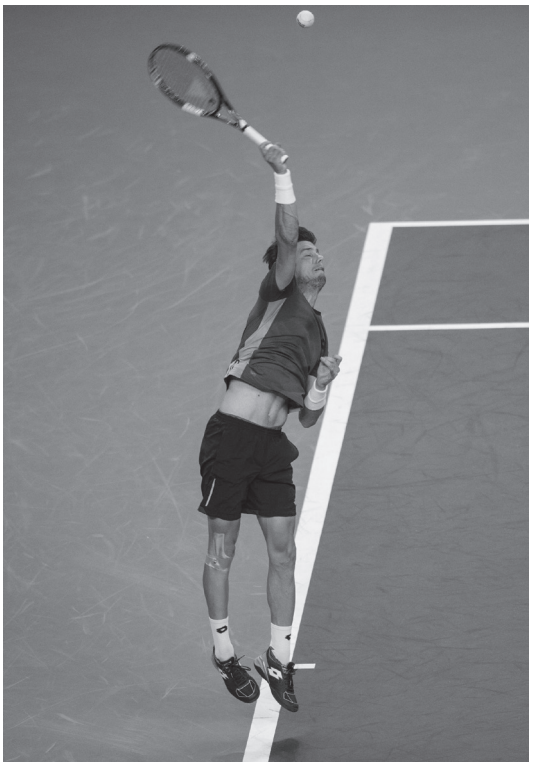
3 .....

.....

[3]

[Total: 13]

12 The photograph shows a tennis serve being performed.



Classify the skill of a tennis serve on each of the following continua.
Justify your answers.

open and closed .....

.....

.....

.....

.....

basic and complex .....

.....

.....

.....

.....

[4]

13 (a) Name the stages of learning and describe a different characteristic of a performer at each stage.

first stage of learning .....

characteristic of a performer at this stage .....

.....

.....

second stage of learning .....

characteristic of a performer at this stage .....

.....

.....

third stage of learning .....

characteristic of a performer at this stage .....

.....

.....

[6]

(b) Name **one** type of guidance and describe **two** different examples of how this type of guidance could be applied when learning a skill.

type of guidance .....

example 1 .....

.....

example 2 .....

.....

[3]

[Total: 9]

14 (a) Describe **one** benefit of the use of technology in sport for officials.

.....

..... [1]

(b) Describe, using examples from **two** named physical activities, the positive impact of technology on spectators.

physical activity 1 .....

example 1 .....

.....

physical activity 2 .....

example 2 .....

.....

[2]

(c) Suggest **two** ways that the internet and social media may benefit a performer.

1 .....

.....

2 .....

.....

[2]

[Total: 5]

© UCLES 2019

15 (a) Describe **two** typical characteristics of an extrovert personality type.

1 .....

.....

2 .....

.....

[2]

(b) Suggest a physical activity that is typically performed by introverts. Give a reason for your answer.

physical activity .....

reason .....

.....

[2]

[Total: 4]

BLANK PAGE

© UCLES 2019

BLANK PAGE

© UCLES 2019

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.

© UCLES 2019