Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

5503805412

PHYSICAL EDUCATION **0413/13**

Paper 1 Theory **May/June 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 Name **three** components of blood.

1 .....

2 .....

3 .....

[3]

2 **(a)** Plantar flexion is a type of movement.

Describe an example of when plantar flexion is used in **two** different physical activities.

physical activity 1 .....

example 1 .....

.....

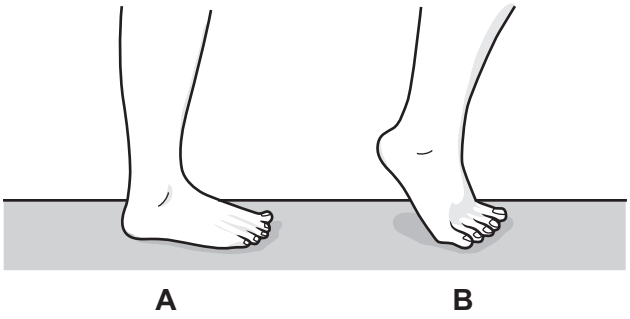
physical activity 2 .....

example 2 .....

.....

[2]

(b) The diagram shows an example of plantar flexion.



(i) Sketch and label a diagram of the class of lever used in the movement from **A** to **B**.

[2]

(ii) Identify the class of lever shown in your diagram.

..... [1]

[Total: 5]

3 State **three** features of mental health and well-being.

1 .....

.....

2 .....

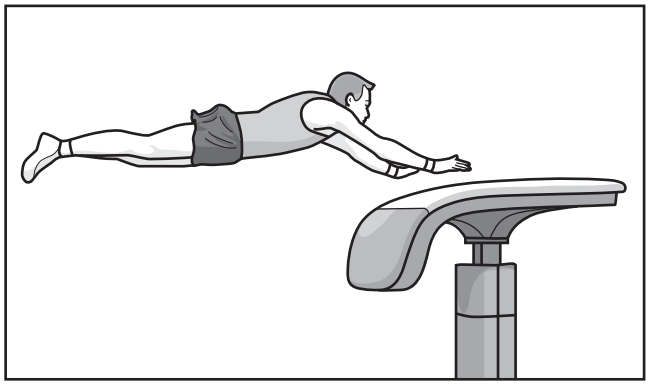
.....

3 .....

.....

[3]

4 The diagrams show performers from two different physical activities. The gymnast is performing a skill and the runners are maintaining a steady pace during a long-distance run.



gymnast



runners

(a) Name **two** components of fitness required by both the gymnast and the runners. Justify the choice of each fitness component for both types of performer.

component of fitness 1 .....

justification for gymnast .....

.....

justification for runners .....

.....

component of fitness 2 .....

justification for gymnast .....

.....

justification for runners .....

.....

[6]

(b) Name and describe **two** fitness tests.

name of test 1 .....

description .....

.....

.....

.....

.....

.....

name of test 2 .....

description .....

.....

.....

.....

.....

.....

[8]

[Total: 14]

5 Explain how **two** named factors may influence the type of recreational activity people take part in.

factor 1 .....

explanation .....

.....

factor 2 .....

explanation .....

.....

[4]

6 **(a)** Describe **one** feature of each of the following:

cognitive anxiety .....

.....

somatic anxiety. .....

.....

[2]

(b) A games player is preparing to play a match.

(i) Suggest **two** causes of cognitive anxiety for a games player before starting a match.

1 .....

.....

2 .....

.....

[2]

(ii) Describe examples of how a games player could use **three** different named relaxation techniques to control arousal and anxiety during a match.

relaxation technique 1 .....

example .....

.....

relaxation technique 2 .....

example .....

.....

relaxation technique 3 .....

example .....

.....

[6]

[Total: 10]

7 Photograph **A** shows athletes in a sprint hurdles race and photograph **B** shows athletes running at a steady pace in a long-distance race.



A



B

(a) State the main type of respiration used to release energy by the athletes in photograph **A** in a sprint hurdles race. Summarise the process with an equation.

main type of respiration .....

equation

[2]

(b) Describe ways that the main type of respiration used to release energy by the athletes in photograph **B** when running at a steady pace is different to the main type of respiration used to release energy by the athletes in photograph **A** in a sprint hurdles race.

.....

.....

.....

.....

.....

..... [3]

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(c) During games activities the energy demands of performers may change.

Suggest **two** different situations in a named game activity when the energy demands of a games player may change.

game activity .....

situation 1 .....

.....

situation 2 .....

.....

[2]

(d) Describe **two** factors that will affect the recovery time of a performer.

1 .....

.....

2 .....

.....

[2]

[Total: 9]

8 **(a)** One type of guidance is visual.

Name **two** other types of guidance.

1 .....

2 .....

[2]

(b) Describe **two** examples of visual guidance in a named physical activity.

physical activity .....

1 .....

.....

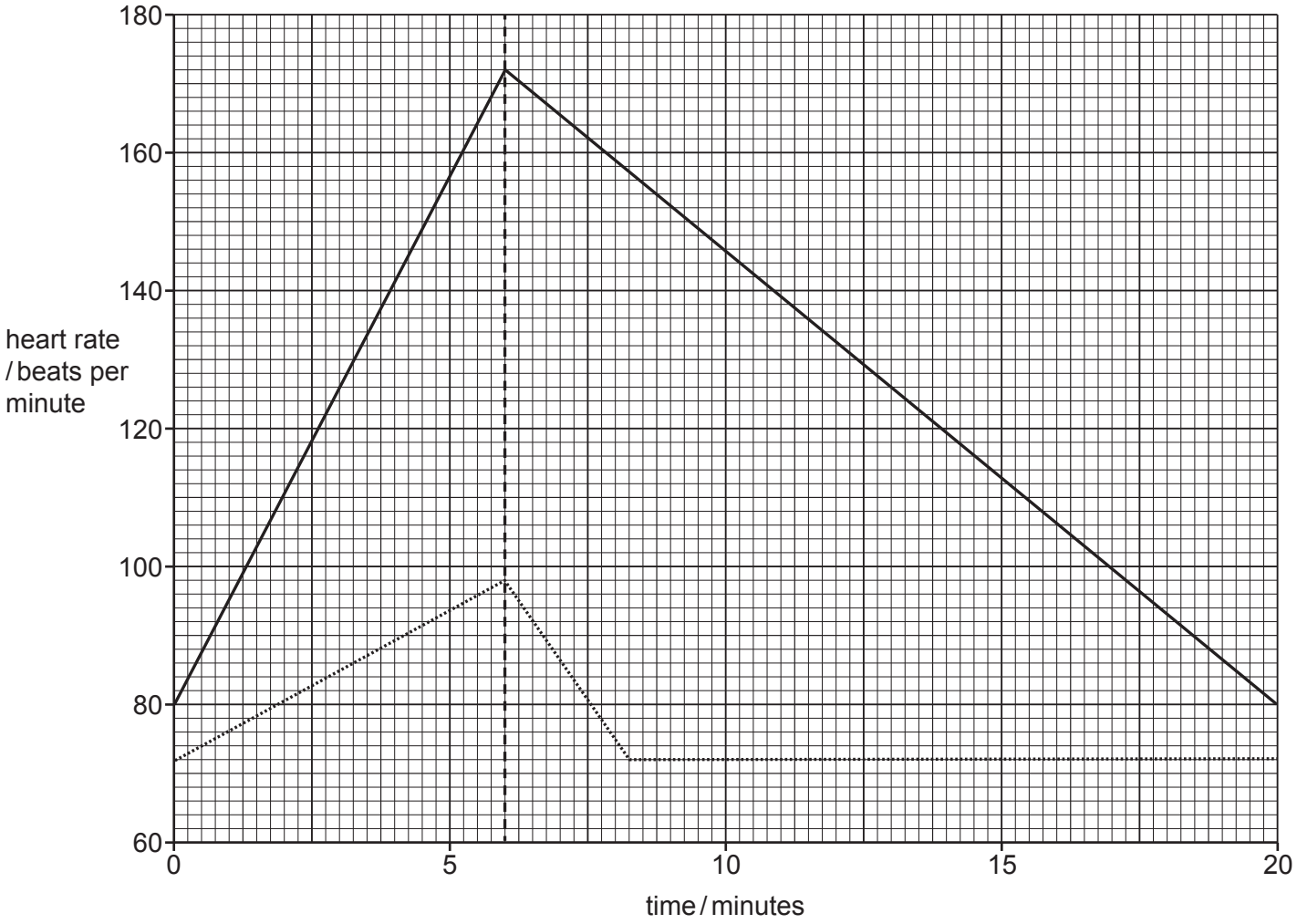
2 .....

.....

[2]

[Total: 4]

9 **(a)** The graph shows the simplified heart rates of two performers, performer **A** and performer **B**. Both performers are exercising at the same intensity and for the same time.



Using the graph, suggest which performer is fitter, performer **A** or performer **B**. Give **three** reasons to justify your answer.

fitter performer .....

reason 1 .....

.....

reason 2 .....

.....

reason 3 .....

.....

[3]

(b) The fitter performer may have a higher VO_2 max.

(i) State the component of fitness that VO_2 max indicates.

..... [1]

(ii) Describe how **three** named factors may affect VO_2 max.

factor 1 .....

description .....

.....

factor 2 .....

description .....

.....

factor 3 .....

description .....

.....

[6]

(c) Describe **three** short-term effects of exercise, other than effects on the heart.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

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(d) Describe **three** benefits for performers of a cool down.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

[Total: 16]

10 (a) Describe **two** features of the HIIT method of training.

1 .....

.....

2 .....

.....

[2]

(b) Explain the advantages of the HIIT method of training for a games player.

.....

.....

.....

.....

.....

..... [3]

(c) State **two** dangers of overtraining.

1 .....

.....

2 .....

.....

[2]

[Total: 7]

11 The photograph shows a sailing competition taking place.



(a) Suggest **three** factors that should be considered when carrying out a risk assessment for the activity in the photograph.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(b) Describe what is meant by the term *perceived risk* and identify an example of a perceived risk when sailing.

description .....

.....

example .....

.....

[2]

(c) Name **one** minor injury that could occur when sailing and describe an appropriate treatment for the injury.

minor injury .....

.....

treatment .....

.....
[2]

[Total: 7]

12 Describe the physiological reasons for a performer taking part in a warm up.

.....

.....

.....

.....

.....

..... [3]

13 Some performers choose to train at high altitude.

(a) Name the type of activities in which performances could benefit as a result of training at high altitude. Give a reason for your answer.

type of activities .....

reason .....

.....
[2]

(b) Describe **two** possible disadvantages of training at high altitude for a performer.

1 .....

.....

2 .....

.....
[2]

[Total: 4]

14 The table shows the number of television viewers in the United Kingdom who watched the FIFA Women's Football World Cup in 2011 and in 2015.

year of the FIFA Women's Football World Cup	number of television viewers in the UK / million
2011	5.1
2015	12.4

(a) Suggest the benefits to women's football of an increase in television viewers.

.....

.....

.....

.....

.....

.....

.....

..... [4]

(b) Some of the players who participated in these World Cups were amateurs.

Suggest **two** possible disadvantages for an amateur player when playing against professional players.

1 .....

.....

2 .....

.....

[2]

[Total: 6]

15 A sprinter is preparing for the athletics season.

(a) Suggest how the sprinter could apply the following principles of SMARTER goal-setting:

measurable .....

.....

realistic .....

.....

time-phased. .....

.....

[3]

(b) **(i)** Name the main muscle fibre type used when sprinting.

..... [1]

(ii) Describe **one** feature of the muscle fibre type named in **(b)(i)**.

.....

..... [1]

[Total: 5]

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