Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

0486818176

PHYSICAL EDUCATION **0413/11**

Paper 1 Theory **May/June 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 **16** printed pages.

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[Turn over

1 Name the **two** main muscle groups that enable movement at the knee when running.

1 .....

2 .....
[2]

2 **(a)** Describe **two** characteristics of a performer who is in the associative stage of learning.

1 .....

.....

2 .....

.....
[2]

(b) Describe, using examples, how visual guidance benefits a performer at the cognitive stage of learning.

.....

.....

.....

.....

.....

..... [3]

(c) Explain the importance of receiving feedback when learning a skill.

.....

.....

.....

.....

.....

..... [3]

[Total: 8]

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3 **(a)** **(i)** Name the main muscle fibre type used by a sprinter.

..... [1]

(ii) Describe the different characteristics of the main muscle fibre type used by a sprinter and the main muscle fibre type used by a long-distance runner.

.....

.....

.....

.....

.....

..... [3]

(b) Name and describe the main type of respiration being used to release energy for a sprinter and a long-distance runner.

sprinter .....

.....

.....

.....

long-distance runner .....

.....

.....

.....

[4]

[Total: 8]

4 State **two** functions of the skeleton.

1 .....

2 .....

[2]

5 The photograph shows young performers attending a school's extra-curricular basketball club.



Flexibility and strength are two components of fitness that are important when playing basketball.

(a) Explain how flexibility and strength can benefit a performer when playing basketball.

flexibility .....

.....

.....

.....

strength .....

.....

.....

.....

[4]

(b) Suggest an exercise that could be used to improve flexibility and an exercise that could be used to improve strength at circuit-training stations.

flexibility .....

.....

strength .....

.....
[2]

(c) Describe **one** advantage and **one** disadvantage of using circuit training.

advantage .....

.....

disadvantage .....

.....
[2]

(d) Describe **two** possible benefits of joining an extra-curricular club for a performer's social health and well-being.

1 .....

.....

2 .....

.....
[2]

[Total: 10]

6 Blood doping is a prohibited method of enhancing performance.

(a) Describe how blood doping is carried out.

.....

.....

.....

.....

.....

..... [3]

(b) Suggest **two** potential side effects of blood doping that are harmful to a performer.

1 .....

.....

2 .....

.....

[2]

[Total: 5]

7 **(a)** Describe **one** feature of a skill and **one** feature of ability.

skill .....

.....

ability .....

.....

[2]

(b) **(i)** State an example of an open skill and a closed skill from **one** named physical activity.

physical activity .....

open skill .....

.....

closed skill .....

.....

[2]

(ii) Justify your answer for the open skill in **(b)(i)**.

.....

.....

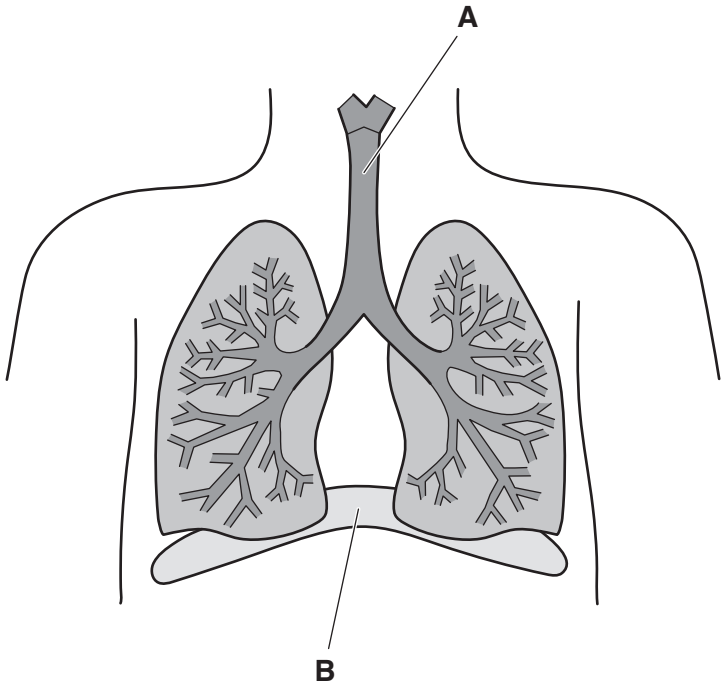
.....

..... [2]

[Total: 6]

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8 The diagram shows part of the respiratory system.



(a) Name the structures labelled **A** and **B**.

A .....

B .....
[2]

(b) Describe the role of the structure labelled **B** during normal breathing.

.....

.....

.....

.....

.....

.....

.....

..... [4]

(c) Describe a named breathing volume and state how it changes, if at all, during exercise.

breathing volume .....

description .....

.....

.....

change during exercise .....
[3]

[Total: 9]

9 **(a)** Describe **one** possible cause of a muscle injury during physical activity.

.....

..... [1]

(b) Describe **two** ways a performer could reduce their chance of suffering a muscle injury.

1 .....

.....

2 .....

.....
[2]

(c) The RICE method can be used to treat muscle injuries. This method includes the use of elevation.

Explain why elevation is used.

.....

..... [1]

[Total: 4]

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10 Complete the table to show some of the components of blood, their function and a benefit each component provides for a performer.

component of blood	function	benefit for a performer
platelets	help with blood clotting	
	kill bacteria	
red blood cells		allows performer to work for longer

[4]

11 **(a)** The table shows rating information for some male and female performers who take the Multi-Stage Abdominal Curl Conditioning Test.

stage	total number of sit-ups	ratings for males	ratings for females
1	20	poor	poor
2	42	poor	fair
3	64	fair	fair
4	89	fair	good
5	116	good	good
6	146	good	very good
7	180	excellent	excellent
8	217	excellent	excellent

(i) State, using the table, the rating for a male who correctly completes 65 sit-ups during the test.

..... [1]

(ii) Name and describe the component of fitness being tested during a Multi-Stage Abdominal Curl Conditioning Test.

name .....

description .....

.....

[2]

(b) Complete the table to show different physical activities, a key component of fitness required for the physical activity and the name of a test that could be used to measure each component of fitness.

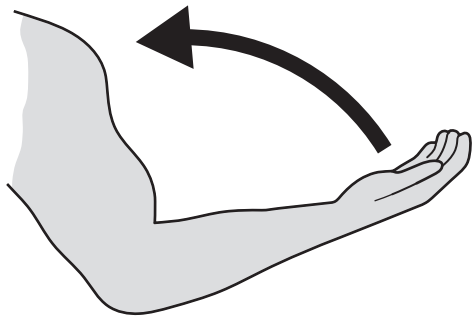
physical activity	component of fitness required	name of test
cricket	coordination	
gymnastics		Standing Stork Test
	power	

[4]

[Total: 7]

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12 The arrow in the diagram shows the direction of a movement at the elbow.



(a) Name the main agonist muscle and the main antagonist muscle in the movement shown.

agonist .....

antagonist .....
[2]

(b) **(i)** Name a different type of movement that occurs at each of the following joints:

the elbow joint

.....

the shoulder joint.

.....
[2]

(ii) Explain the difference in stability between the elbow joint and the shoulder joint.

.....

.....

.....

..... [2]

[Total: 6]

13 An inexperienced runner with a low VO_2 max. decides to join a running club with the intention of eventually completing a marathon.

(a) Name an appropriate method of training to improve the runner's VO_2 max. Give reasons for your answer.

method of training .....

reasons .....

.....

.....

.....

[3]

(b) Explain how **three** factors can affect a performer's VO_2 max.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(c) State **two** short-term effects of exercise on a performer.

1 .....

.....

2 .....

.....

[2]

(d) When following a training programme performers must try to avoid overtraining.

State **two** dangers of overtraining for a performer.

1 .....

.....

2 .....

.....

[2]

[Total: 10]

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14 (a) Draw a second class lever and label the fulcrum, resistance and effort.

[2]

(b) Describe an example of when a second class lever is used in a named physical activity.

physical activity .....

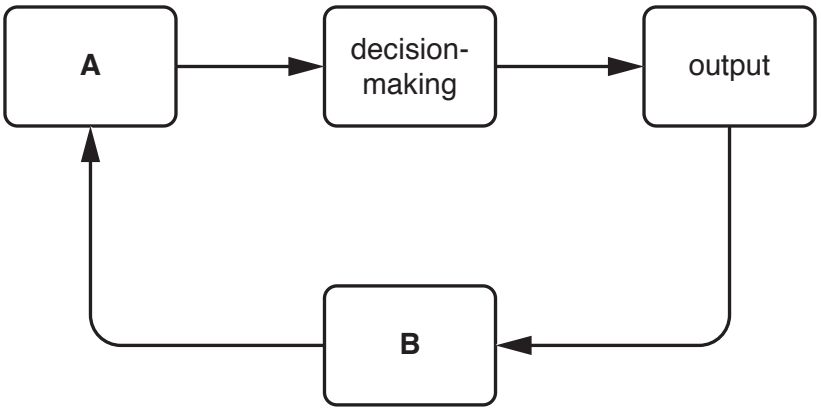
example .....

.....

[1]

[Total: 3]

15 The diagram shows the stages of a basic information processing model.



(a) Name the stages labelled **A** and **B**.

A .....

B .....
[2]

(b) Explain, using an example of a skill in a physical activity, the role of decision-making and output in the model.

example of skill .....

decision-making .....

.....

output .....

.....
[2]

[Total: 4]

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16 (a) Describe **four** factors that have contributed to growth in leisure activities.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

(b) Explain how **four** factors affect a person's ability to participate in physical activity as they get older.

1 .....

.....

.....

2 .....

.....

.....

3 .....

.....

.....

4 .....

.....

.....

[4]

(c) Suggest strategies to increase participation of people with a disability.

.....

.....

.....

.....

.....

.....

.....

..... [4]

[Total: 12]

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