

Surname	Centre Number	Candidate Number
First name(s)		0



GCSE

C550U10-1



MONDAY, 2 NOVEMBER 2020 – AFTERNOON

PHYSICAL EDUCATION (FULL COURSE)

Component 1: Introduction to Physical Education

2 hours

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.a	16	
1.b	2	
1.c	2	
1.d	3	
2.a	14	
2.b	4	
2.c	5	
2.d	2	
3.a	2	
3.b	8	
3.c	2	
3.d	3	
3.e	7	
4.a	3	
4.b	9	
4.c	6	
4.d	8	
5.a	6	
5.b	7	
5.c	5	
5.d	6	
Total	120	

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

Diagrams, charts and graphs can be used to support answers when they are appropriate.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

Answer all questions.



1. (a) (i) Using the images above, classify the skills of a **gymnastic vault** and a **football pass**. Tick (✓) one box only for each of the classifications. [4]

Self paced skill	Tick (✓) one box only
Gymnastic vault	
Football pass	

Externally paced skill	Tick (✓) one box only
Gymnastic vault	
Football pass	

Open skill	Tick (✓) one box only
Gymnastic vault	
Football pass	

Closed skill	Tick (✓) one box only
Gymnastic vault	
Football pass	

(ii) Justify your answers given in 1(a)(i).

[4]

	Justification
Gymnastic vault	
Football pass	

(iii) Identify the most appropriate fitness tests for the gymnastic vaulter and football player. Justify the reasons for your choices. [6]

Vaulter

Test:

.....

Justification:

.....

.....

.....

Football player

Test:

.....

Justification:

.....

.....

.....



- (iv) The quadriceps of a football player are contracting concentrically when kicking the ball. Identify and explain the characteristics of **one other** type of muscle contraction. [2]

Muscle contraction:

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.....

Explanation:

.....

.....

- (b) Both the gymnast and the football player would have set goals for their training. Describe how setting goals can improve performance. [2]

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- (c) Explain how the use of modern technology in coaching has a positive effect on performance in sport. [2]

1.

.....

2.

.....

- (d) (i) Identify the first stage of a typical warm-up.

[1]

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only

- (ii) Identify **two** types of stretching that could be used in a warm-up.

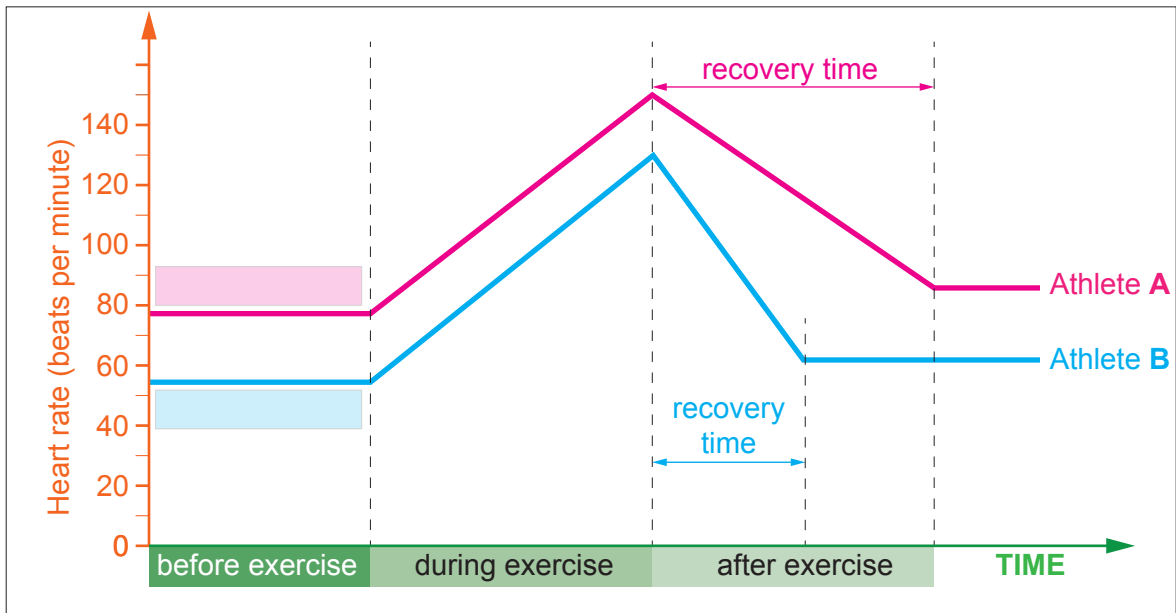
[2]

1.

2.

23

2.



- (a) (i) Analyse the graph above which shows an aerobic interval training session for two 16-year-old athletes (labelled **A** and **B**). Identify which athlete is the fitter. Justify the reasons for your decision. [4]

Fitter athlete:

Justification:

.....

.....

.....

- (ii) Calculate the maximum heart rate for a 16-year-old athlete. [1]

.....

.....

- (iii) Identify the normal resting stroke volume for a healthy individual.

Tick (✓) **one** box only.

[1]

70 ml

☐

700 ml

☐

20 ml

☐

200 ml

☐

20
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- (b) (i) Identify the main energy system used in each sporting example below.

[2]

Sporting example	Main energy system
Marathon	
100m Sprint	

- (ii) Explain the terms aerobic and anaerobic threshold.

[2]

Aerobic threshold:

.....

Anaerobic threshold:

.....

- (c) (i) Identify which term below describes the *Oxygen Debt*.

Tick (✓) **one** box only.

[1]

Restoring oxygen by heavy breathing after exercise has finished

☐

Restoring carbon dioxide by heavy breathing after exercise has finished

☐

Restoring carbon dioxide by running harder

☐

Restoring oxygen by running harder

☐

- (ii) Using examples, explain how the principle of *Overload* could be used to progress training.

[4]

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.....

- (d) (i) Name **one** function of the respiratory system.

[1]

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only

- (ii) Identify the component of fitness that is being described below.

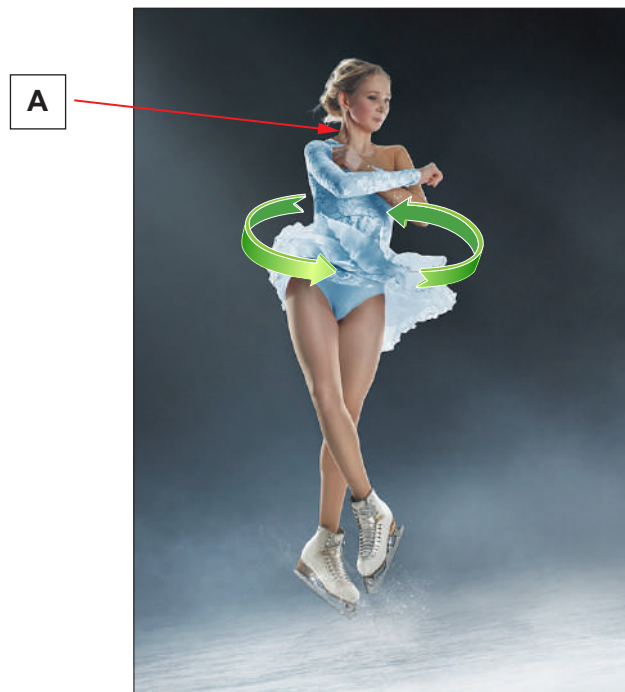
[1]

'the percentages of fat, bone, water and muscle in the human body'

25

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09

3.



(a) Analyse the image above. Select the correct plane and axis from the list below.

[2]

Transverse	Frontal	Vertical	Sagittal	Flexion
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Plane:

Axis:

(b) (i) Identify the type of joint in the neck shown at **A**.

Tick (✓) one box only.

[1]

Pivot

☐

Ball and socket

☐

Cranium

☐

Hinge

☐

(ii) Name the predominant energy system used during the spin in the image above. [1]

.....

- (iii) Complete the table below to explain how the shoulder and knee joints could be used in sport. [6]

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Joint site	Joint type	Movement at the joint	Explain how this joint is used in a sport of your choice
Shoulder			
Knee			

- (c) Name **two** bones found in the leg.

[2]

1.

2.

- (d) Whole, part, fixed and varied are all types of practice. Explain, using examples, when each may be used in sport. Whole practice has been completed for you. [3]

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Type of Practice	Explanation
WHOLE	Dribbling in basketball because it can't be broken down into parts.
PART	
FIXED	
VARIED	

- [7]

4.



- (a) Analyse the image above to select the muscles used in the legs during the drive phase. [3]

A

B

C

- (b) (i) Identify **two** types of muscles.

Tick (✓) **two** boxes only.

[2]

Smooth ☐

Eccentric ☐

Isometric ☐

Frontal ☐

Skeletal ☐

- (ii) Explain the importance of speed and reaction time for the sprinter shown in the image above. [4]

Speed:

Reaction Time:

- (iii) Explain **one** training method that can be used to develop speed. [3]

Training method:

.....

Explanation:

.....

.....

.....

.....

- (c) (i) Identify the structures from the descriptions below. [2]

Attaches muscle to bone:

Attaches bone to bone:

- (ii) Levers allow movement.

Draw a line to match the lever component with the correct statement. [3]

Lever Component	Statement
Load	Force generated by the muscles
Fulcrum	The weight that needs to be moved
Effort	The joint where the lever rotates

- (iii) Identify the outcome in a lever action when the effort arm is longer than the resistance arm.

Tick (✓) **one** box only.

[1]

Mechanical advantage

☐

Frontal plane

☐

Mechanical disadvantage

☐

Sagittal plane

☐

[8].

- I.
- II.
- III.

(ii) Identify **one** strategy to increase involvement by any target group.

[1]

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(d) (i) Explain the difference between health and fitness.

[2]

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(ii) Explain, using examples, **two** benefits of taking part in physical activity.

[4]

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END OF PAPER

