

Surname	Centre Number	Candidate Number
Other Names		0

GCSE



C550U10-1



PHYSICAL EDUCATION (FULL COURSE)
Component 1: Introduction to Physical Education

WEDNESDAY, 15 MAY 2019 – MORNING

2 hours

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.a	6	
1.b	6	
1.c	6	
1.d	2	
1.e	1	
2.a	4	
2.b	6	
2.c	4	
2.d	4	
2.e	4	
3.a	6	
3.b	4	
3.c	10	
3.d	2	
3.e	9	
4.a	2	
4.b	1	
4.c	3	
4.d	8	
4.e	6	
4.f	4	
5.a	4	
5.b	1	
5.c	1	
5.d	4	
5.e	2	
5.f	6	
5.g	4	
Total	120	

INSTRUCTIONS TO CANDIDATES

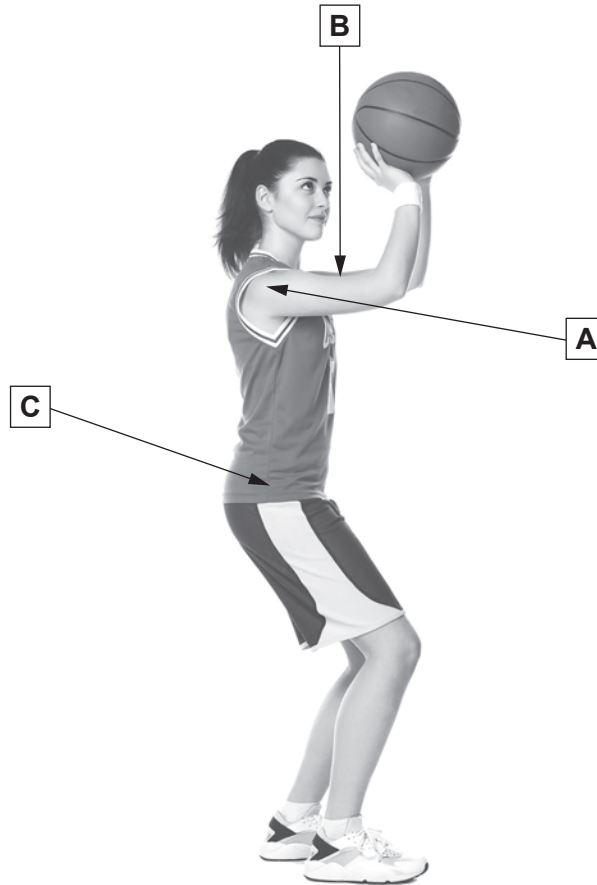
Use black ink or black ball-point pen.
 Write your name, centre number and candidate number in the spaces at the top of this page.
 Answer **all** questions.
 Write your answers in the spaces provided in this booklet. If you run out of space, use the continuation page at the back of the booklet, taking 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.

Study the image of a basketball player in action.



1. (a) (i) Complete the table below.

[2]

Name the type of joint at A	Name the muscle at B

(ii) Many types of movement can occur at the hip joint **C**. Identify **two** of these movements, giving specific sporting examples to justify your choice. [4]

Type of movement	Example

Passing a ball in basketball requires the use of power and coordination.

- (b) (i) Define the terms 'power' and 'coordination'. [2]

Power:

Coordination:

- (ii) Explain how the components of power and coordination are used in sports such as basketball. [2]

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- (iii) Identify and explain **one** other component of fitness that can be used in a team game. [2]

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(d) Explain why it is important for a sports performer to monitor their fitness levels. [2]

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(e) Fitness can be described as:

Tick (✓) **one** box only.

[1]

The ability to meet the demands of the environment

Total physical, mental and social well-being


A form of physical exercise done to improve health or fitness, or both

Emotionally and physically healthy

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Passing in the game of hockey is a predominantly open skill.

Open skill	Closed skill
<p>A</p>  <p>Hockey Pass</p>	<p>B</p>

2. (a) (i) Justify the decision to place a hockey pass at point **A** on the continuum above. [2]

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- (ii) Describe what is meant by a closed skill. Use a sporting example to explain your answer. [2]

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- (c) (i) Complete the table below by naming an appropriate fitness test for each of the components of fitness. [3]

Component of fitness	Name of fitness test
Muscular Endurance	
Strength	
Agility	

- (ii) Name **one** other method, apart from fitness testing, that could be used to monitor fitness levels. [1]

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- (d) A player in a team sport such as hockey will use both aerobic and anaerobic energy systems. Explain how they are used giving specific examples to support your answer. [4]

Energy system	Explanation
Aerobic energy system
Anaerobic energy system

- (e) Explain using examples, the terms 'varied' and 'fixed practice'. [4]

Varied practice:

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Fixed practice:

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(iii) Explain **two** reasons why a warm up would benefit an endurance athlete. [2]

1.

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2.

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(d) Explain how a performer can speed up recovery after being involved in intense physical activity. [2]

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(e) (i) Match the functions of nutrients in the boxes below to the appropriate nutrients in the table. [3]

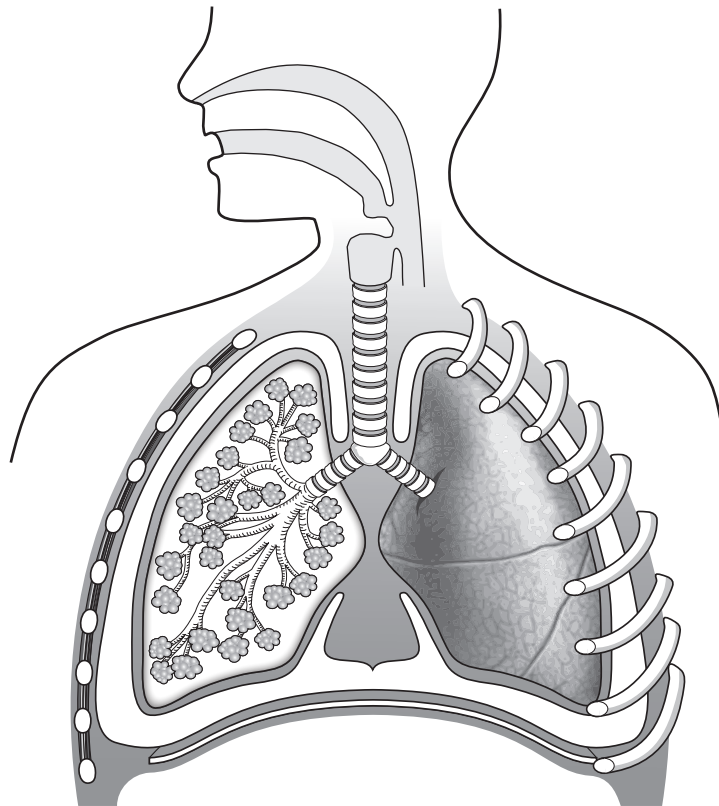
C – Energy

B – Growth and repair

A – Hydration

Nutrient	Function
Protein	
Carbohydrate	
Water	

Figure 1: The respiratory system



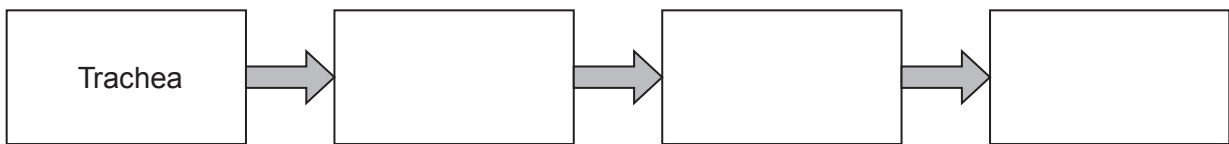
(ii) Place these structures in the correct order of air flow below.

[3]

Bronchus

Alveoli

Bronchioles



- (iii) Match the lung volumes to the correct values during moderate exercise.

[3]

Examiner
only**Lung volumes****Values**

Tidal volume

90 litres / min

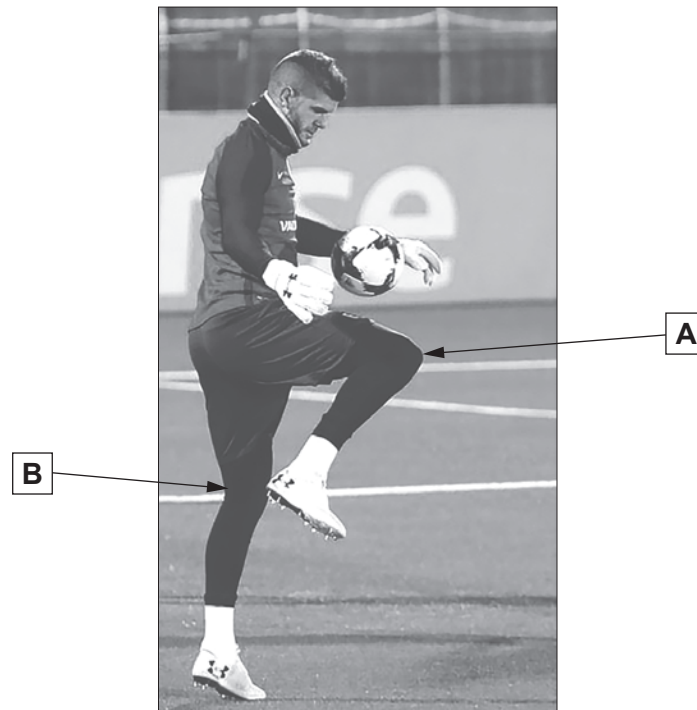
Breathing frequency

3 litres

Minute ventilation

30 breaths / min

31



4. (a) Classify the type of movement at points **A** and **B** in the image above. [2]

Right Knee (**A**):

Left Knee (**B**):

(b) Identify the plane of movement of the footballer's right knee (**A**).
Tick (✓) **one** box only. [1]

Sagittal

Frontal

Transverse

Abduction

(c) Identify and explain a fitness training method that would be suitable for a games player. [3]

Name of fitness training method:

Explanation

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(d) Discuss the factors that might affect participation in physical activity of individuals in the following target groups. [8]

1. Gender:

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2. Disability:

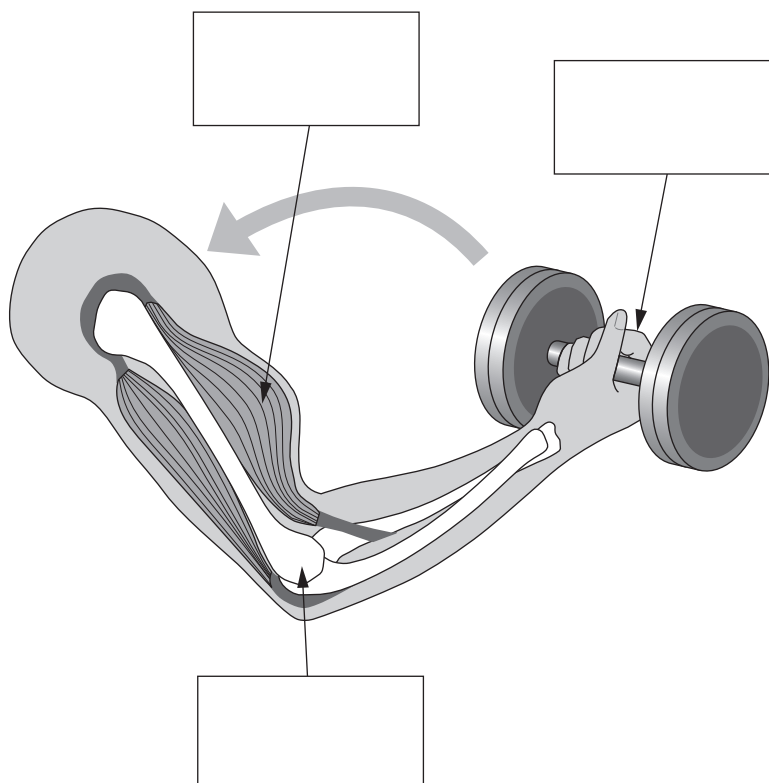
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- (e) (i) Levers in our body are formed from bones, joints and muscles. [3]

Complete the boxes below using the following terms:

Fulcrum (F)
Load (L)
Effort (E).

Figure 2



- (ii) Explain the antagonistic muscle action occurring around the elbow joint. [2]

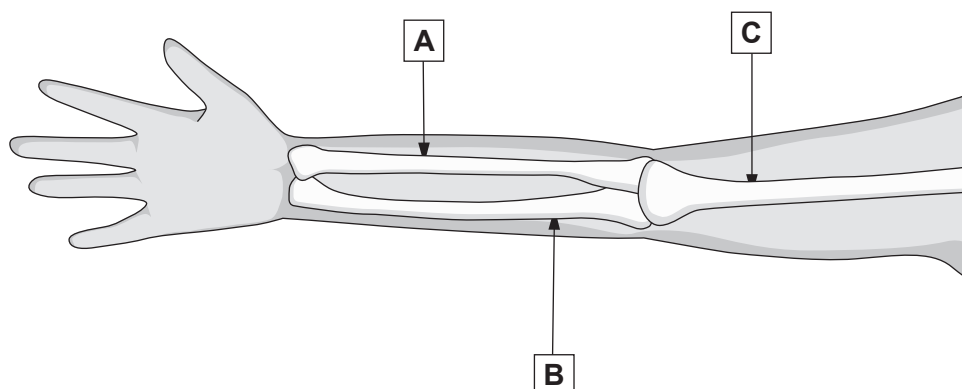
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- (iii) Identify the type of muscle contraction occurring in the upward phase of the bicep curl. [1]

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Figure 3



(f) (i) Name the bones in **Figure 3**.

[3]

A:

B:

C:

(ii) Outline a function of flat bones.

[1]

Tick (✓) **one** box only.

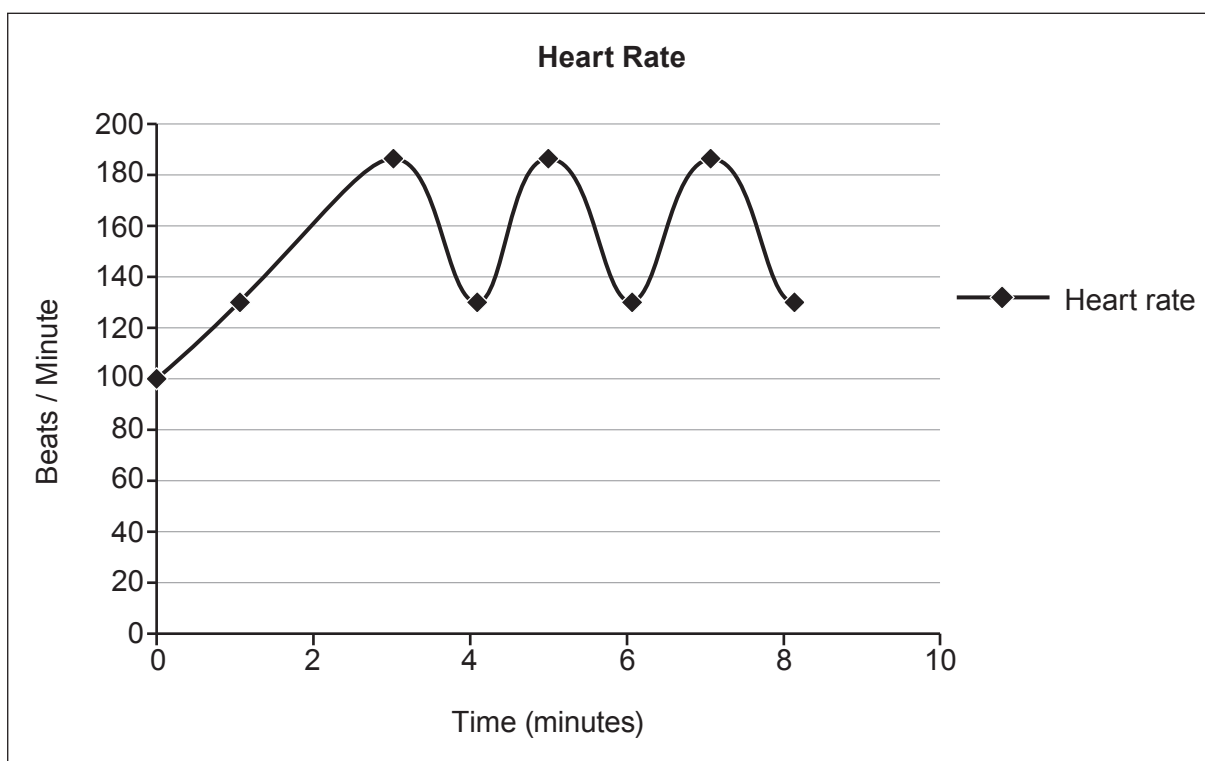
Protect

Movement

Transportation

Remove waste products

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5. (a) The graph above shows the heart rate of a 16-year-old sprinter during a training session.

Using your knowledge of training zones and training methods, analyse what has happened to the heart rate in the graph above. [4]

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(b) State the percentage of maximum heart rate required for an athlete to be working in the aerobic training zone. [1]

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(c) Identify the average cardiac output during moderate exercise for a healthy individual.

Tick (✓) **one** box only.

[1]

24L / min		2L / min		5L / min	
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(d) Explain **two** possible consequences of leading a sedentary lifestyle.

[4]

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(e) Having sufficient sleep is a positive lifestyle choice. Describe **two** other positive lifestyle choices.

[2]

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(f) (i) Describe **two** principles of training.

[2]

1.

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2.

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(ii) Explain using examples, how these principles of training can be used to improve the fitness of a sports performer.

[4]

1.

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2.

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(g) Discuss the advantages and disadvantages of the use of technology for officials in sport. [4]

Examiner
only

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END OF PAPER

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