

Surname	Centre Number	Candidate Number
Other Names		0



GCSE – NEW

C555U10-1



**PHYSICAL EDUCATION (Short Course)
Component 1: Introduction to Physical Education**

WEDNESDAY, 16 MAY 2018 – MORNING

1 hour

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.a	6	
1.b	3	
1.c	3	
1.d	3	
2.a	9	
2.b	3	
2.c	2	
2.d	5	
3.a	1	
3.b	3	
3.c	4	
3.d	6	
4.a	6	
4.b	4	
4.c	2	
Total	60	

ADDITIONAL MATERIALS

You may use a calculator in this examination.

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.

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. The following is an image of a weightlifter at the end of a successful lift.



(a) (i) Name **one** component of fitness needed by the weightlifter shown in the image for him to hold the bar still at the end of the lift. [1]

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(ii) Justify your reasons for choosing the fitness component named in (a)(i) above. [2]

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(iii) Explain why an understanding of the principle of **overload** is important for weightlifters when training and competing. [3]

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- (b) (i) Identify the type of muscle contraction taking place when the weightlifter holds the bar still above his head at the end of the lift.

Tick (✓) **one** box only.

[1]

ISOMETRIC

ECCENTRIC

CONCENTRIC

ISOKINETIC

- (ii) Classify the type of joint shown at the knee.

Tick (✓) **one** box only.

[1]

PIVOT

BALL AND SOCKET

HINGE

CONDYLOID

- (iii) Identify the main type of muscle fibres that have been used to lift the weights.

Tick (✓) **one** box only.

[1]

VOLUNTARY TWITCH

FAST TWITCH

SLOW TWITCH

CARDIAC TWITCH

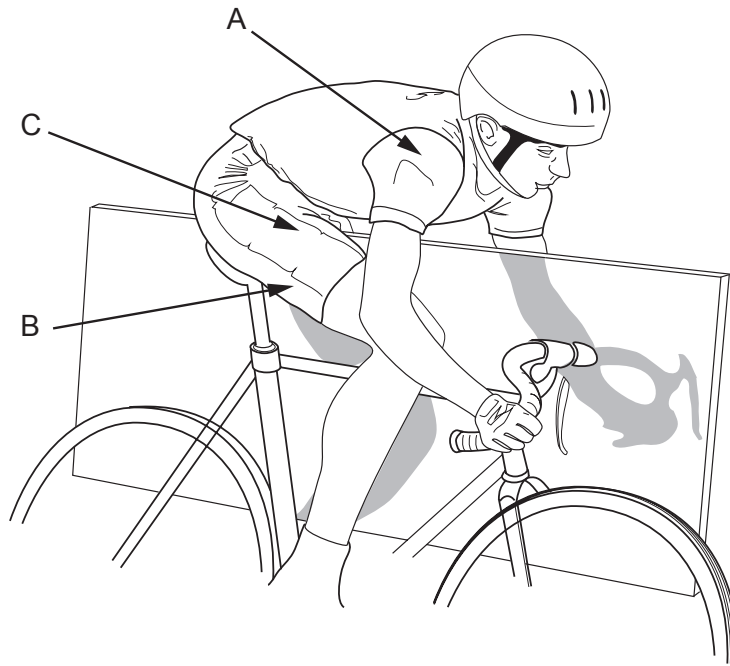
- (c) Identify the following types of muscle by matching the description to the type of muscle. Draw a line to match the description to the type of muscle. [3]

Description	Type of muscle
Found only in the heart	Voluntary
Found around organs and blood vessels	Cardiac
Attached to the skeleton	Involuntary

- (d) Identify the following type of movement by matching the definition to the type of movement. Draw a line to match the definition to the type of movement. [3]

Definition	Type of movement
The movement of parts of the body towards the centre	Rotation
The joint moves in a circular motion	Abduction
The movement of body parts away from the centre	Adduction

2.



(a) (i) Cycling is an activity that requires both aerobic and anaerobic fitness.

Identify **two** short term effects that might take place as a result of participating in a period of intense physical activity. [2]

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(ii) Describe what is meant by the term 'aerobic threshold'. [1]

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(iii) Explain why an understanding of the aerobic threshold is important to sportsmen and women. [3]

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(iv) Assess how the training of a competitive cyclist could differ from the training of a sedentary individual. [3]

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(b) (i) Classify the type of joint shown at the shoulder of the cyclist (point A on the cyclist).

Tick (✓) **one** box only.

[1]

- HINGE
- BALL AND SOCKET
- GLIDING
- PIVOT

The plane of movement of the legs of the cyclist is in the sagittal plane.

(ii) Explain why the legs of the cyclist are moving in the sagittal plane.

[2]

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The 2016 State of the UK Fitness Industry Report stated that 1 in every 7 people in the UK was a member of a gym, an increase from the previous year.

(b) Explain why gym membership has increased. [4]

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(c) Suggest **two** factors that could help improve an individual's adherence to an exercise programme. [2]

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