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.



Name <b>one</b> component of fitness needed by the weightlifter shown in the image him to hold the bar still at the end of the lift.	for [1]
Justify your reasons for choosing the fitness component named in (a)(i) above.	[2]
Explain why an understanding of the principle of <b>overload</b> is important for weightlift when training and competing.	ers [3]
	him to hold the bar still at the end of the lift.  Justify your reasons for choosing the fitness component named in (a)(i) above.  Explain why an understanding of the principle of <b>overload</b> is important for weightlift

(a)

				E	Examiner
(b)	(i)	Identify the type of muscle contra bar still above his head at the en	action taking place when the weightlifter holds d of the lift.	the	only
		Tick (✓) one box only.		[1]	
		ISOMETRIC			
		ECCENTRIC			
		CONCENTRIC			
		ISOKINETIC			
	(ii)	Classify the type of joint shown a	at the knee.		
		Tick (✓) one box only.		[1]	
		PIVOT			C555U101
		BALL AND SOCKET			C
		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.

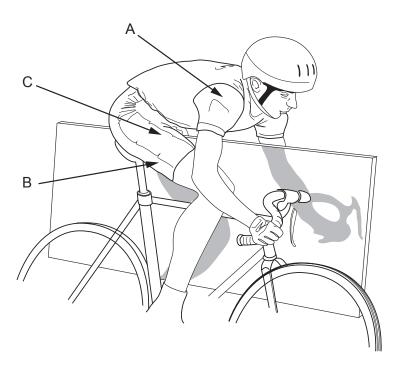
[3]

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.[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

(a)



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

• \_\_\_\_\_\_

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

[1]

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

Cycling is an activity that requires both aerobic and anaerobic fitness.

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

[2]

(c)	Identify 1	the muscle	groups	shown	at points	В	and (	C 0	of the	cyclist.
-----	------------	------------	--------	-------	-----------	---	-------	-----	--------	----------

С

Point on cyclist	Muscle group
В	

(d)	Define the term 'health' and explain how taking part in regular physical activity can person's mental and social well-being.	help a [5]
•••••		
•••••		
•••••		· · · · · · · · · · · · · · · · · · ·

C555L

Define the term 'energy balance'.	[1]
Explain how physical exercise can reduce the impact of increasing obesity levels in UK.	the [3]
Evaluate the importance of endurance athletes such as marathon runners changing the	neii
diets in preparation for competition.	[4] 
	Explain how physical exercise can reduce the impact of increasing obesity levels in

(d)	Using sporting examples, analyse how different types of flexibility training could helimprove sporting performance. [6]
•••••	
••••••	
•••••	
•••••	
•••••	
•••••	
•••••	
•••••	

**4.** Read the following test data recorded by a 16-year-old during a 12 week training programme to improve muscular endurance.

BODY PART	EXERCISE	REPS WK1	REPS WK6	REPS WK12
TOTAL BODY	SKIPPING	36	42	47
UPPER BODY	PRESS UPS	19	23	28
UPPER BODY	BICEP CURLS	24	28	36
LOWER BODY	FORWARD LUNGE	13	19	26
LOWER BODY	SQUATS	18	22	30

(a)	Using your kno performance too	wledge of principl k place over the co	es of training, ourse of the prog	evaluate why ramme.	y the imp	rovements in [6]
•••••						
•••••						
•••••						

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

		Examiner only
•••••		
•••••		
•••••		
(c)	Suggest <b>two</b> factors that could help improve an individual's adherence to an exercise programme. [2]	
•••••		

### **END OF PAPER**

For continuation only.	Examiner only

# **BLANK PAGE**

# **BLANK PAGE**