Surname	Centre Number	Candidate Number
First name(s)		0



### **GCSE**





C555U10-1

## **WEDNESDAY, 17 MAY 2023 – AFTERNOON**

# PHYSICAL EDUCATION (Short Course)

**Component 1: Introduction to Physical Education** 

1 hour

#### **ADDITIONAL MATERIALS**

You may use a calculator in this examination.

#### **INSTRUCTIONS TO CANDIDATES**

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

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 additional page(s) 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.

1.a (i)       1         1.a (ii)       2         1.a (iii)       1         1.a (iv)       1         1.b       6         1.c       3         1.d       4         2.a (i)       3         2.a (ii)       3         2.b (i)       3         2.b (ii)       3         2.c       7         3.a       8         3.b       4         4.a       3         4.b (i)       1	For Exa	aminer's us	e only
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1.a (iii) 1 1.a (iv) 1 1.b 6 1.c 3 1.d 4 2.a (i) 3 2.a (ii) 3 2.b (i) 3 2.b (ii) 3 2.c 7 3.a 8 3.b 4 4.a 3 4.b (i) 1	1.a (i)	1	
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3.a 8 3.b 4 4.a 3 4.b (i) 1	2.b (ii)	3	
3.b 4 4.a 3 4.b (i) 1	2.c	7	
4.a 3 4.b (i) 1	3.a	8	
4.b (i) 1	3.b	4	
110 (1)	4.a	3	
	4.b (i)	1	
4.b (ii) 3	4.b (ii)	3	
4.c 4	4.c	4	
Total 60	Total	60	



## Answer all questions.

1. Figure 1 – An athlete in training.



(a)	(i)	Identify the training method shown in Figure 1.	[1]
		Tick (✓) one box only.	
		Fartlek	
		Weight	
		Plyometric	
		Flexibility	
	(ii)	Justify your reasons for choosing the training method in 1(a)(i).	[2]
	•••••		············



	(iii)	Name the component of fitness that could be improved by using the training method shown in <b>Figure 1</b> .	[1]
		Tick (✓) one box only.	
		Flexibility	
		Endurance	
		Strength	
		Power	
	(iv)	Identify a specific sporting activity in which the component of fitness named in <b>1</b> (a)(iii) would be used.	[1]
	•••••		
b)	Eval: <b>1</b> (a)(	uate how a sportsperson could develop the component of fitness identified in iii), in order to improve performance.	[6]
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	<b>1</b> (a)(	uate how a sportsperson could develop the component of fitness identified in iii), in order to improve performance.	
	<b>1</b> (a)(	iii), in order to improve performance.	
(b)	<b>1</b> (a)(	iii), in order to improve performance.	



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(c)	Muscles can be placed in the	nree main types.	
	Draw a line to match the typ	pe of muscle to the correct description.	[3]
	Muscle type	Description	
	Skeletal muscle	Only found in the heart	
	Smooth muscle	Involuntary muscle which works automatically	
	Cardiac muscle	Voluntary muscle which is under our control	
(d)	Explain the main difference	s between fast and slow-twitch muscle fibres.	[4]
•••••			



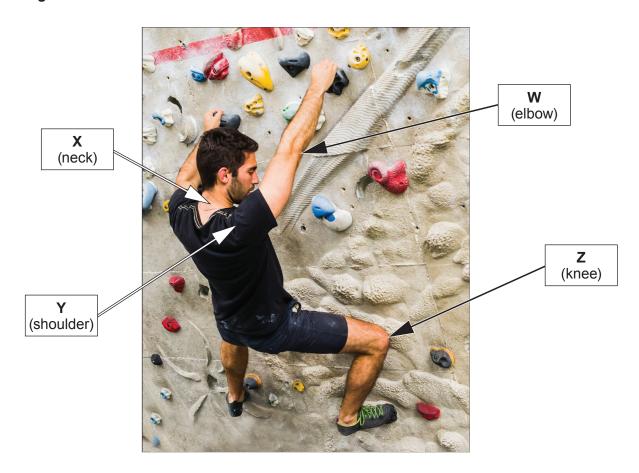
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2. In order to perform effectively, climbers require strength, flexibility and muscular endurance.

Figure 2 – A climber.



(a)	(1)	Osing Figure 2 identity the timee types of joint.	ျပ
		<b>X</b> (neck)	
		Y (shoulder)	
		<b>Z</b> (knee)	
	(ii)	Using <b>Figure 2</b> identify the type of movement taking place at <b>W</b> , <b>Y</b> and <b>Z</b> .	[3]
		<b>W</b> (elbow)	
		Y (shoulder)	
		<b>7</b> (knoo)	



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Component of fitness	Definition	
Strength		
Flexibility		
Muscular endurance		
(ii) Describe, us strength, flex	ing <b>Figure 2</b> , why climbers would need to have high levels of ibility and muscular endurance.	



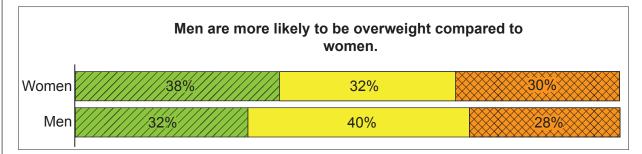
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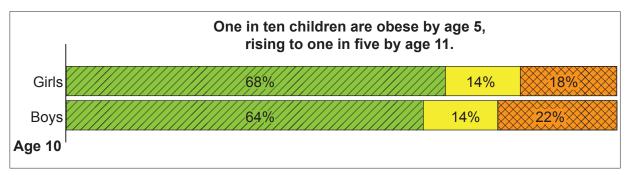
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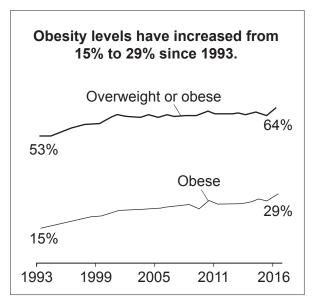


- 3. Study the following data from a recent health report:
  - In England more than 1 in 4 children aged 4–5 are overweight or obese.
  - 1 in 3 children are overweight by the time they leave primary school.
  - 1 in 4 boys and slightly fewer girls aged 15 are overweight or obese.
  - 1 in 4 adults are obese.









(a)	Discuss the possible causes of obesity, and suggest solutions to the problem.	[8]



(b) Explain the short-term effects of exercise on the body.	[4]



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Warm up for	8 minutes.
Run 150 meti	res in 28 seconds, walk back to start and recover for 1 minute 30 seconds
Repeat × 2.	
Run 200 met	res in 32 seconds, walk back to start and recover for 2 minutes.
Repeat × 2.	
Cool down fo	r 6–8 minutes.
	ur knowledge of the principles of training, explain how the training session <b>Figure 3</b> could be changed in order to enhance performance.
shown in	
shown in	Figure 3 could be changed in order to enhance performance.
shown in	Figure 3 could be changed in order to enhance performance.
shown in	Figure 3 could be changed in order to enhance performance.



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(b)	(i)	Identify the method of training described in Figure 3.	[1]	only
		Tick (✓) one box only.		
		Training Method		
		Flexibility		
		Interval		
		Continuous		
		Strength		
	(ii)	Identify the main component of fitness that could be developed in the training session described in <b>Figure 3</b> . Justify your answer.	[3]	
		Component of fitness:		
		Justification:		
	•••••			
	•••••		······	



(5)				
(c)	Explain how the cardio-respiratory and vascular systems adapt as a result of long-term participation in physical activity.	[4]		
•••••				
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