Surname	Centre Number	Candidate Number
First name(s)		0



GCSE

\$23-C550U10-1



C550U10-1

WEDNESDAY, 17 MAY 2023 – AFTERNOON

PHYSICAL EDUCATION (FULL COURSE)

Component 1: Introduction to Physical Education

2 hours

INSTRUCTIONS TO CANDIDATES

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



Question	Maximum Mark	Mark Awarded
1.a	4	
1.b	2	
1.c	3	
1.d	6	
1.e	7	
1.f	7	
1.g	2	
2.a	13	
2.b	2	
2.c	2	
2.d	6	
3.a	3	
3.b	7	
3.c	6	
3.d	6	
4.a	12	
4.b	3	
4.c	4	
4.d	5	
5.a	7	
5.b	5	
5.c	6	
5.d	2	
Total	120	

For Examiner's use only

	Answer all questions.	
Spor healt	t England's 2019 survey states, 'More women, disabled people and those with long- h conditions are getting active'.	term
(a)	Explain two factors that have affected participation rates of these target groups.	[4]
	1.	
	2.	
(b)	Identify two long-term health conditions associated with a sedentary lifestyle. 1	[2]
	2.	
(c)	Explain the relationship between health, fitness and well-being.	[3]
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(d)	Evaluate the effect of long-term exercise on the social and mental well-being of an individual.	6]
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Identify the changes in values to the cardio-respiratory and vascular systems from rest to exercise. [4] (e) Complete the information in the table below.

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	Rest	Increases or decreases during exercise
Stroke volume	0.7 L	
Blood pressure	120 mmHg systolic	
Breathing frequency	12 breaths per min	
Tidal volume	0.5L	

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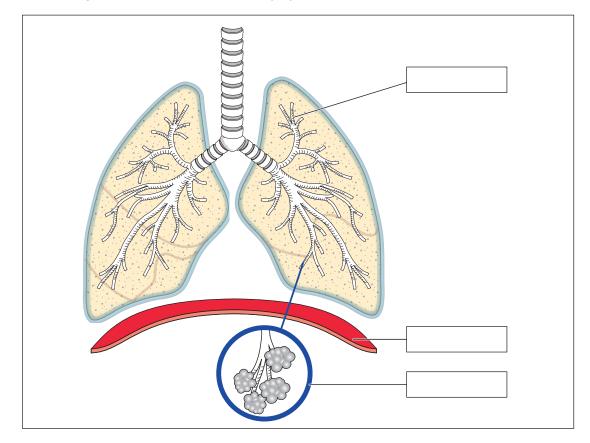
[3]

(ii) Identify the components of the respiratory system.

Place **one** letter into each box.

- A. DiaphragmB. AlveoliC. Bronchioles

Figure 1 – a diagram of part of the respiratory system.



(f)	(i)	Explain why it is important for a sportsperson to work within the aerobic training zone.	9 [4]
	•••••		



		5		Exami
	(ii)	Explain why continuous training would be used to develop the aerobic energy system.	[3]	only
(g)	Expl	ain the function of carbohydrates and fats during aerobic exercise.	[2]	
				31



Turn over.

2.	(a)	(i)	Identify the component of fitness each test measures in the table below.	[3]	
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Fitness test	Result	Component of fitness
Vertical jump test	60 cm (excellent)	
Ruler drop test	7.5 cm (excellent)	
30 m sprint test	4.9 sec (average)	

(ii)	From the data in the table above, explain an appropriate SMART target for the 15-year-old sprinter.	e [6]
	SMART target:	

•••••		•••••

(iii)	Assess the importance of a fitness test being both reliable and valid.	[2]
•••••		
•••••		
•••••		· · · · · · · · · · · · · · · · · · ·



	(iv)	Apart from fitness testing, identify two other measurement tools that could be used to assess the physical fitness and health of the sprinter.	[2]
	•••••	1.	
		2.	
(b)	Expl	ain how a sprinter could apply the principle of overload to their training.	[2
(c)	Expl	ain how schools may have influenced the participation of the sprinter.	[2
			••••



(d)	(i)	Explain the differences between an open and closed skill. Use sporting examples to support your answer.	[4]
	(ii)	Explain the most appropriate type of practice to develop a closed skill.	[2]
		h	
	•••••		

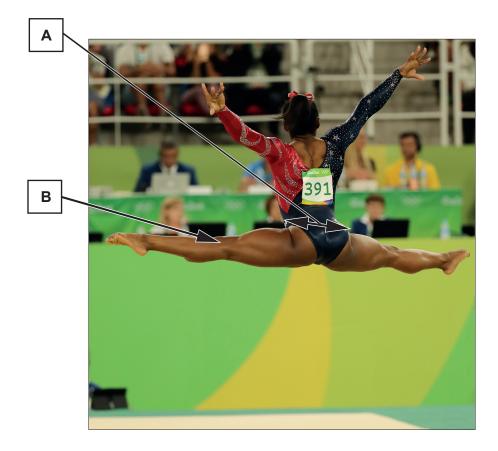


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3. Figure 2 – a gymnast performing a split leap.



(a) Analyse, using **Figure 2**, the movement taking place at the hips (**A**) and knee (**B**) of the gymnast.

Type of movement at A (Hip)	Type of movement at B (Knee)	Plane of movement at A (Hip)	

09

(ii) Define flexibility. [1] (iii) Justify why flexibility is needed by a gymnast. [2] (iii) Explain how one method of training could be used to develop flexibility. [3] Method of training: Explanation: (iv) Identify one principle of training from the list below. [1] Tick (/) one box only. Speed	(b) Flex	xibility is an essential physical fitness component of a gymnast.	
(iii) Explain how one method of training could be used to develop flexibility. [3] Method of training: Explanation: (iv) Identify one principle of training from the list below. [1] Tick (/) one box only. Speed Specificity Minerals	(i)	Define flexibility.	[1]
Method of training: Explanation: (iv) Identify one principle of training from the list below. Tick (/) one box only. Speed Specificity Minerals	(ii) 		······································
Tick (/) one box only. Speed Specificity Minerals	(iii)	Method of training:	
Specificity Minerals	(iv)		[1]
Measurable		Specificity	
		Measurable	



		Co-ordination:
 (i	i)	Identify a recognised fitness test for each of the components of fitness below.
Comp of fitn		
Balanc	e	
Co-orc	lina	ition
Flexibi	lity	

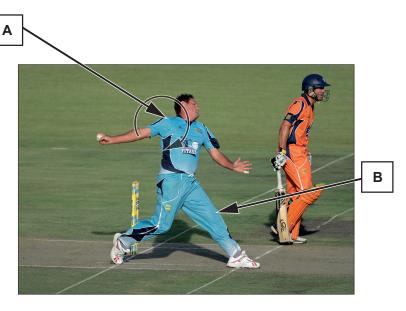
		Exa
(iii) Identify which term is defined as 'a muscle that shortens under tension'.	[1]	C
Tick (✓) one box only.		
Eccentric muscle contraction		
Concentric muscle contraction		
Isokinetic muscle contraction		
Isometric muscle contraction		
(d) Analyse the characteristics of a skilled performer.	[6]	
	••••••	



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4. Figure 3 – a bowler in cricket.

Examiner only



(a) (i) Analyse the correct movement and agonist muscle at **A** and **B** in **Figure 3**. [4]

	Movement	Agonist
A (shoulder)		
B (knee)		

(ii) Explain **two** movements, other than those stated in **4**(a)(i), that can occur at the shoulder joint. [4]

Movement	Explanation



(iii)	Explain, using sporting examples, the terms 'prime mover' and 'antagonist'.	[4]
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•••••		···········
(i)	Identify one flat bone that provides protection in a game such as cricket.	[1]
•••••		
(ii)	Describe two ways that a player can assist their recovery after exercise.	[2]
•••••		······
•		
***********		•••••••••••••
**********		••••••
	(i)	(i) Identify one flat bone that provides protection in a game such as cricket.



(c)	Assess how intrinsic and extrinsic feedback could influence the performance of a sportsperson such as a cricketer.	[4]
d)	Evaluate how the use of mental preparation could benefit a sportsperson.	[5]
		······································



Turn over.

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5. Figure 4 – a long distance runn	er.
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(a)	(i)	Using Figure 4 , ide	entify the type of synovial joint shown at A .	[1]
		Ball and socket		
		Pivot		
		Hinge		
		Gliding		

	Gliding		
(ii)	Identify the plane of	movement taking place at A .	[1]
	Tick (✓) one box onl	y.	
	Frontal		
	Sagittal		
	Vertical		



Transverse

2		(iii)	Identify the three bones found in the arm.	[3]
(b) (i) Outline three physical short-term effects of aerobic exercise on the body. [3] 1		(iv)	2	[2]
3	(b)	(i)	Outline three physical short-term effects of aerobic exercise on the body.	[3]
		(ii) 	3. Explain the characteristics of anaerobic exercise.	[2]



(c)	Sponsorship and the media play a major part in financing sport. Discuss this relationship.	[6]
•••••		
• • • • • •		
• • • • • •		
d)	Explain two possible negative consequences of the use of technology to analyse sporting performance.	[2]
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• • • • • •		

END OF PAPER

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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.	Exam onl
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