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A-level

Physical Education

Paper 1 Factors affecting participation in physical activity and sport

Monday 11 June 2018

Morning

Time allowed: 2 hours

Materials

For this paper you may have:

· a calculator.

Instructions

- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the top of this page.
- Answer all questions. You must answer the questions in the spaces provided.
 Do not write on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

For Exam	iner's Use
Section	Mark
Α	
В	
С	
TOTAL	

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 105.
- Questions should be answered in continuous prose. You will be assessed on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.



Section A

	Applied anatomy and physiology	
	Answer all questions in this section.	
Only one a	answer per question is allowed.	
For each a	nswer completely fill in the circle alongside the appropriate answer.	
CORRECT MET	HOD WRONG METHODS	
If you want	to change your answer you must cross out your original answer as sho	wn.
If you wish as shown.	to return to an answer previously crossed out, ring the answer you now	wish to select
0 1	Which receptor is responsible for detecting a change in blood pressur	e? [1 mark]
	A Baroreceptor	
	B Chemoreceptor	0
	C Proprioceptor	0
0 2	Which method of estimating energy expenditure involves measuring the consumption of Q.2	ne production of
	CO ₂ and/or the consumption of O ₂ ?	[1 mark]
	A Indirect calorimetry	0
	B Lactate sampling	0
	C VO ₂ max test	0



0	3

Table 1 shows the oxygen content of arterial and venous blood at rest and during intense aerobic exercise.

Table 1

	Re	est	Intense exer	aerobic cise
	Arterial	Venous	Arterial	Venous
	blood	blood	blood	blood
ml O ₂ /100 ml blood	20	15	20	5

0 3 . 1	Define the term A-VO ₂ diff. [1 mark]
0 3.2	Explain the change in A-VO ₂ diff during exercise. Use the data in Table 1 in your
	answer. [3 marks]
	Turn over for the next question



0 4	Figure 1 below shows a tennis player performing a forehand stroke.
	Figure 1
	Right shoulder
	A B
0 4.1	Identify the main agonist, and plane and axis of movement at the right shoulder as the tennis player in Figure 1 moves from position A to position B .
	[3 marks]
	Agonist:
	Plane:
	Axis:
0 4.2	In Figure 1 , the main muscle fibre type used for a powerful forehand stroke is fast glycolytic (type IIx). State three characteristics of this muscle fibre type. [3 marks] 1 2 3



Turn over for the next question DO NOT WRITE ON THIS PAGE ANSWER IN THE SPACES PROVIDED



0 5

Figure 2 shows Chris Froome. He is a British cyclist and multiple Tour de France winner.

In 2015 he recorded a VO_2 max score of 84.6 ml/kg/min. An average cyclist would have a VO_2 max score of 40–42 ml/kg/min.

Figure 2



Analyse the factors which explain Chris Froome's higher VO_2 max **and** the effects these factors have on his performance.

[8 marks]



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0 6	Proprioceptive Neuromuscular Facilitation (PNF) is a specialist training method used by a range of athletes.
	Explain the role of proprioceptors in PNF and evaluate its effectiveness as a specialist training method.
	Use sporting examples in your answer. [15 marks]
	You may use this space to plan your answer.



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	Cootion B	
	Skill acquisition	
	Answer all questions in this section.	
0 7	Baddeley and Hitch devised a model of the working memory.	
	Which subsystem in this model deals with auditory information from th help produce a memory trace?	e senses to
		[1 mark]
	A Episodic buffer	
	B Phonological loop	0
	C Visuospatial sketchpad	0
0 8	Which types of feedback would be most appropriate for a performer in	the cognitive
	stage of learning?	[1 mark]
	A Knowledge of performance, negative, intrinsic	0
	B Knowledge of performance, positive, extrinsic	0
	C Knowledge of results, negative, intrinsic	0
	D Knowledge of results, positive, extrinsic	0
0 9	Performers need to learn skills in order to take part in physical activity movements are learned, economic and consistently successful.	Skilled
	State three other characteristics of skill.	[3 marks]
	1	
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	3	



1 0	Vygotsky's Social Development Theory is a constructivist theory. Learning is built up in stages based on the current level of performance.	
	Outline the three stages of development in this theory.	
	Give a sporting example for each stage. [3 marks]	s]
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1 1	'Verbal guidance is a suitable way of introducing a new skill to a cognitive learner.'	
	Discuss this statement. [4 marks	;]
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1 2	Goalkeepers in hockey need to respond quickly to the actions of the attacking players.					
	Analyse the factors which will affect a goalkeeper's response time and the strategies a coach can use to help them respond quicker. [8]	ategies 8 marks]				
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3	Skill classification can be used to place skills onto a range of continua including:
	 Simple – Complex Discrete – Serial – Continuous Self-paced – Externally paced
	High Organisation – Low Organisation.
	'Progressive part practice is suitable for developing a tumbling routine in gymnastics.'
	Evaluate this statement, using your knowledge of the continua listed above. [15 marks]
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	Section C	
	Sport and society	
	Answer all questions in this section.	
1 4	Which of these is a characteristic of the popular recreation available t in pre-industrial Britain?	o the lower class [1 mark]
	A Local and specific to each community	0
	B Regular	0
	C Rule based	0
	D Skill and tactics based	0
1 5	Ethnic minorities may be pushed into certain sports, based on assum them.	ptions about
	What is this an example of?	[d manula]
		[1 mark]
	A Channelling	0
	B Racism	0
	C Stacking	0
	D Stereotyping	0
1 6	State two social benefits to an individual of increasing their participati activity and/or sport.	on in physical
	1	
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1 7	Explain two benefits of sponsorship to companies investing large amounts of money into sport.
	[4 marks]
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1 8	Rational recreation saw the development of early professionalism during the industrial and post-industrial era (1780–1900).
	Explain the differences between the gentleman amateur and working-class
	professional and the impact these had on their participation during this time. [4 marks]
	[+ marko]



Lauren is a 22-year-old member of a local athletics club and has regularly competed in middle distance races since an early age.
Evaluate the impact that socialisation could have had on Lauren's choices and her current involvement in sport.
[8 mar
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2 0

Table 2 shows the participation data for disabled and non-disabled adults over a 4-year period since the London 2012 Olympic and Paralympic Games.

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Table 2

% participating in 30 minutes of moderate intensity activity at least once per week				
	Non-disabled	Disabled		
2012–2013	40.1	19.1		
2013–2014	39.8	17.6		
2014–2015	39.6	17.2		
2015–2016	39.9	16.8		

Explain the barriers that disabled athletes face **and** evaluate the effectiveness of the strategies used to overcome these barriers.

Use the data in **Table 2** to support your answer.

[15 marks]

You may use this space to plan your answer.			



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END OF QUESTIONS

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