

Newaruing Learnin

ADVANCED
General Certificate of Education
2016

Centre Number				
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# **Sports Science and the Active Leisure Industry**

Unit A2 2

assessing

The Application of Science to Sports Performance

## [A2LB1] TUESDAY 24 MAY, MORNING



TIME

2 hours.

#### **INSTRUCTIONS TO CANDIDATES**

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper. Answer **all five** questions.

#### **INFORMATION FOR CANDIDATES**

The total mark for this paper is 100.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question. Quality of written communication will be assessed in Questions **3(c)**, **4(b)**, **5(b)** and **5(c)**.

For Examiner's use only		
Question Number	Marks	
1		
2		
3		
4		
5		

Total	
Marks	
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### Answer all questions

Examiner Only				
Marks	Remark			

(a)	Def	ine cardiac output.	
			[2]
(b)	(i)	State the expected stroke volume for an elite athlete at rest.	
	(ii)	Explain the response of an elite athlete's stroke volume when exercise levels increase from rest to maximal effort.	
			[3]

tline the <b>tw</b>				Examiner Marks R
			[2]	
			[2]	

(c)

10280 **3 [Turn over** 

performs	s a warm-up.	N	Marks R
(i)			
		[2]	
(ii)			
(,			
		[2]	
		[2]	
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(iii)			
		[2]	

)	Describe <b>two</b> physiological adaptations that occur as a result of regular anaerobic training.	Examiner O
	[4]	

Examiner Only  Marks Remark		Identify the difference between a response and an adaptation.	(i)	(c)
		Describe <b>two</b> adaptations made by the respiratory system in response to regular aerobic training.	(ii)	
	[4]			

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	Explain the difference between the following joint actions duri ecognised sporting movement.	ing a
(	i) Flexion and Extension	
		[2]
(1	ii) Plantar Flexion and Dorsiflexion	

(c)	As a coach it is important to be aware of the short term and long term effects of exercise on the skeletal system.	Exami Marks	ner Only Remark
	Assess <b>three</b> positive and <b>three</b> negative effects of training on the skeletal system that a coach should be aware of when training young athletes.		
	The quality of written communication is assessed in this question.		

	Examin Marks	er Only Remark
[8]		

/i\	
(i)	
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	 [4]
(ii)	
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				er Only
			Marks	Remark
		[4]		
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Motivation can be a major factor for optimum performance.		ner Only
Discuss how a coach could use <b>three</b> motivational strategies to maintain an athlete's motivation throughout the season.	Marks	Remark
The quality of written communication is assessed in this question.		

	Exami	ner Only
	Marks	Remark
[12]		

Explain <b>two</b> disa power athlete.			Marks
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		[4]	1

(b)	Technology plays an undisputed role in sport.		Examine Marks	er Only Remark
	Identify <b>two</b> types of technological equipment used by officials to assist with the decision-making process. Evaluate the use of technology by officials in sport.			
	The quality of written communication is assessed in this question.			
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	Exami	ner Only
	Marks	Remark
[12]		

(c)	Athletes use technology to improve training and enhance performance.		Examin Marks	er Only Remark
	Discuss the role of technology in the preparation of elite athletes in the 21st Century.	!		
	The quality of written communication is assessed in this question.			
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	Examiner O	
	Marks	Remark
[16]		

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