



Rewarding Learning

ADVANCED

General Certificate of Education

2016

Centre Number

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Candidate 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



A2LB1

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	

Answer **all** questions

1 (a) Define cardiac output.

[2]

(b) (i) State the expected stroke volume for an elite athlete at rest.

[1]

(ii) Explain the response of an elite athlete's stroke volume when exercise levels increase from rest to maximal effort.

[3]

Examiner Only	
Marks	Remark

(c) Outline the **two** phases of the cardiac cycle during physical activity.

(i) _____

_____ [2]

(ii) _____

[2]

Examiner Only	
Marks	Remark

2 (a) Explain **three** physiological responses that occur when an athlete performs a warm-up.

(i) _____

_____ [2]

(ii) _____

_____ [2]

(iii) _____

_____ [2]

Examiner Only	
Marks	Remark

[4]

Examiner Only	
Marks	Remark

(c) (i) Identify the difference between a response and an adaptation.

 [1]

(ii) Describe **two** adaptations made by the respiratory system in response to regular aerobic training.

 [4]

Examiner Only	
Marks	Remark

_____ [8]

Examiner Only	
Marks	Remark

4 (a) Identify and explain the effects of **three** types of transfer that may occur when learning and performing movement skills.

(i) _____

_____ [4]

(ii) _____

_____ [4]

Examiner Only	
Marks	Remark

(iii) _____

_____ [4]

Examiner Only	
Marks	Remark

(b) Motivation can be a major factor for optimum performance.

Discuss how a coach could use **three** motivational strategies to maintain an athlete's motivation throughout the season.

The quality of written communication is assessed in this question.

[illegible]

Examiner Only	
Marks	Remark

- (i) Identify and describe an **illegal** method a power athlete might use to enhance performance.

[4]

Examiner Only	
Marks	Remark

[4]

Remark

(b) Technology plays an undisputed role in sport.

Identify **two** 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.

[illegible]

Examiner Only	
Marks	Remark

Blank lined area for student response.

Examiner Only	
Marks	Remark

[16]

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