



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

Examiner Only	
Marks	Remark

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]

(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

(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

3 (a) Identify **three** muscular adaptations that are likely to occur as a result of prolonged aerobic training.

[3]

(b) Explain the difference between the following joint actions during a recognised sporting movement.

(i) Flexion and Extension

[2]

(ii) Plantar Flexion and Dorsiflexion

[2]

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

[12]

Examiner Only	
Marks	Remark

[Turn over

[12]

Examiner Only	
Marks	Remark

[Turn over

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