

Write your name here

Surname	Other names
---------	-------------

Edexcel
Principal Learning

Centre Number

--	--	--	--	--	--

Candidate Number

--	--	--	--	--	--

Sport and Active Leisure

Level 3

Unit 3: Science and Technology in Sport and Active Leisure

Friday 7 June 2013 – Afternoon

Time: 1 hour 30 minutes

Paper Reference

SL303/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 60.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

P41420A

©2013 Pearson Education Ltd.

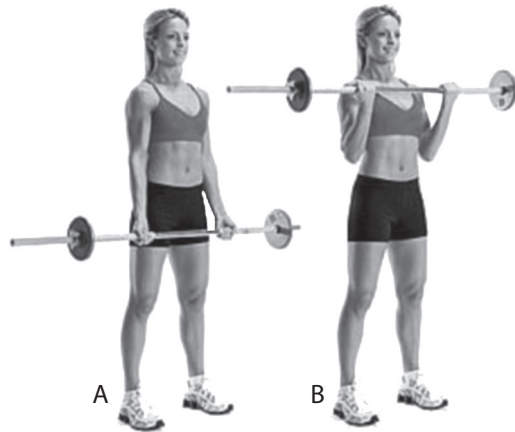
1/1/1/1/1



PEARSON

Answer ALL questions. Write your answers in the space provided.

1 **Figure 1** shows an athlete performing a bicep curl.



(Source: www.womenshealthmag.com)

Figure 1

During the bicep curl, movement occurs at the elbow.

(a) Identify **two** of the bones at the elbow joint.

(2)

- 1
- 2

(b) Complete the table below for the downward movement of a bicep curl.

(4)

Name of Joint	Type of Joint	Movement at Joint	Agonist	Type of Muscular Contraction
Elbow				

(c) The elbow is part of the appendicular skeleton.

Outline the difference between the axial and appendicular skeletons.

(2)

-
-
-
-

(Total for Question 1 = 8 marks)



2 Ayesha is taking part in a hockey training session and the weather conditions are cold. At the beginning of the session she feels cold but after 20 minutes she feels hot and starts sweating.

Describe how Ayesha's cardiovascular system uses thermoregulation to maintain a stable body temperature.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 2 = 4 marks)



4 David is taking part in a 120 mile charity swim.

Describe the function of the aerobic energy system during an endurance activity, such as this swim.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(Total for Question 4 = 4 marks)



5 (a) Acceleration is a term used in biomechanics.

Describe what is meant by the term acceleration.

(2)

.....

.....

.....

.....

.....

.....



6 Laura is taking part in a month long expedition. This will require her to do a 30 mile walk each day over a mountainous area. She will need to carry a heavy rucksack. Laura is of average fitness.

(a) Identify **two** methods of training that would be suitable to prepare Laura for this expedition.

(2)

Method 1

.....

.....

Method 2

.....

.....



8 **Figure 3** shows a wheelchair athlete in a race.



(Source: © Getty Images)

Figure 3

- (a) There have been many technological developments in paralympic equipment aimed at improving performance.

For **one** piece of paralympic equipment you have studied, examine how technology has improved athletes' performance.

(6)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



(Total for Question 8 = 14 marks)

TOTAL FOR PAPER = 60 MARKS



BLANK PAGE



BLANK PAGE



BLANK PAGE

Every effort has been made to contact copyright holders to obtain their permission for the use of copyright material. Edexcel, a product of Pearson Education Ltd. will, if notified, be happy to rectify any errors or omission and include any such rectifications in future editions.

