



General Certificate of Education
Advanced Level Examination
June 2010

Health and Social Care

HC13

Unit 13 The Role of Exercise in Maintaining Health and Well-being

Thursday 10 June 2010 1.30 pm to 3.30 pm

For this paper you must have:

- a 12-page answer book.

Time allowed

- 2 hours

Instructions

- Use black ink or black ball-point pen.
- Write the information required on the front of your answer book. The **Examining Body** for this paper is AQA. The **Paper Reference** is HC13.
- Answer **all** questions.
- Do all rough work in your answer book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You will be marked on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.

Answer **all** questions.

There are 20 marks for each question.

Question 1

Marcus is an adult male who has a low VO_2 max. He decides to exercise regularly to improve this and to increase his stamina, muscular strength and his flexibility.

- 0 1** What is VO_2 max? *(4 marks)*
- 0 2** Explain how regular exercise will help improve Marcus's VO_2 max. *(4 marks)*
- 0 3** Outline what is meant by stamina. *(2 marks)*
- 0 4** Name and outline **two** different types of muscular strength. *(6 marks)*
- 0 5** Outline what is meant by flexibility. *(4 marks)*

Question 2

Explain how regular exercise can help to:

- 0 6** raise self-esteem *(4 marks)*
- 0 7** control weight. *(8 marks)*
- 0 8** With reference to physiological processes, explain how warming-up before exercise benefits the individual.
- The quality of your written communication will be assessed in this question. *(8 marks)*

Question 3

The following data were obtained from three healthy adult females (A, B and C) performing an identical exercise over a period of eight minutes. A perceived exertion scale (6–20) was used, with 6 = minimal effort and 20 = maximum effort.

Exercise	Perceived Exertion Scale (6–20)		
	Adult A	Adult B	Adult C
1 min	3	4	4
2 min	3	6	4
3 min	4	9	5
4 min	5	9	6
5 min	5	10	6
6 min	7	12	8
7 min	8	12	9
8 min	10	13	11

0 9 What conclusions can be drawn from the data in the table above? (6 marks)

1 0 Give **one** strength and **one** limitation of using a perceived exertion scale as a measure of fitness. (2 marks)

Adult A measures her peak flow using a peak flow meter and records a normal value.

1 1 Outline what is meant by peak flow. (3 marks)

1 2 Describe how peak flow is measured. (5 marks)

1 3 Give a normal peak flow measurement for an adult. Include the appropriate units in your answer. (2 marks)

1 4 Give **one** strength and **one** limitation of using peak flow readings as a fitness measure. (2 marks)

Turn over for the next question

Turn over ▶

Question 4

Sheila is a healthy adult who has low skill and fitness levels. These are barriers to regular exercise.

1 | 5 Suggest **two** different ways Sheila can use to overcome these barriers. (2 marks)

1 | 6 Apart from low skill and fitness levels, give **three** other common barriers to regular exercise. (3 marks)

1 | 7 Outline the social benefits Sheila may gain from regular exercise. (3 marks)

1 | 8 Name **three** diseases or disorders which can be prevented by regular exercise. (3 marks)

1 | 9 Discuss how regular exercise may be effective in preventing the three diseases you have named.

The quality of your written communication will be assessed in this question. (9 marks)

END OF QUESTIONS