HEALTH AND SOCIAL CARE   **HC13**
Unit 13
The Role of Exercise in Maintaining Health and Well-Being

AQA
ASSESSMENT and
QUALIFICATIONS
ALLIANCE

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 the answer book. Cross through any work you do not want to be marked.

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

This specimen paper (based on HC13 – June 2008) has been modified to show how quality of written communication (QWC) and stretch and challenge will be incorporated into operational papers from January 2010.

In this paper QWC is assessed in: **questions 2(a) and 4(b)(iii)**

There are no discrete marks for QWC and in the final answer QWC will be one of the criteria used to assign a mark. Please refer to the appropriate mark scheme.

ANSWER ALL QUESTIONS

There are 20 marks for each question.

1   Karin is improving her aerobic fitness by taking regular aerobic exercise.
  (a)   (i)   What is the measurement of aerobic fitness and in what units is it measured?
  (3 marks)

      (ii)   Explain how regular aerobic exercise will improve Karin's long-term aerobic fitness. Refer to physiological processes in your answer.
  (7 marks)

  (b)   Suggest three different aspects of muscular fitness which may be improved by regular exercise.
  (3 marks)

  (c)   Describe how regular exercise may help Karin control stress.
  (7 marks)

2   (a)   Discuss to what extent regular exercise can combat the effects of ageing. Refer to physiological processes in your answer.
  (9 marks)

  (b)   Suggest three different safety precautions that are necessary before starting exercise. Give one different reason why each safety precaution is important.
  (6 marks)

  (c)   Describe the effects of regular exercise on appetite.
  (5 marks)

3 The following data were obtained during identical exercise performed for five minutes by three adult males.

	Perceived Exertion Scale (0–10) 0 – no effort 10 – maximum effort		
	Person A	**Person B**	**Person C**
Exercise starts			
1 minute	3	3	2
2 minutes	4	3	3
3 minutes	6	4	5
4 minutes	7	4	6
5 minutes	8	5	7
Exercise stops			

(a) (i) What conclusions can be drawn from the data in the table?

(6 marks)

  (ii) Give **one** strength and one limitation of using perceived exertion scales.

(2 marks)

(b) Tidal volume and Body Mass Index (BMI) were also calculated for the three males over the five minute exercise period.

  (i) Explain how tidal volume is calculated.

(3 marks)

  (ii) Explain how Body Mass Index (BMI) is calculated.

(3 marks)

(c) Person A's BMI was calculated to be 27, while Person B's was 17.

  (i) What does Person A's BMI result indicate?

(1 mark)

  (ii) What does Person B's BMI result indicate?

(1 mark)

  (iii) Outline how exercise pulse rates can be used to compare the fitness levels of two individuals.

(4 marks)

Turn over ▶

4 (a) Suggest three common barriers that may prevent people from taking part in regular exercise. For each barrier suggest one different way it may be overcome.

(6 marks)

  (b)   (i) Name **two** different diseases that may be prevented by regular exercise.

(2 marks)

   (ii) Name **two** different diseases that may be regulated by regular exercise.

(2 marks)

   (iii) Evaluate the use of exercise programmes for preventing or regulating disease.

(10 marks)

END OF QUESTIONS