

General Certificate of Education
January 2010
Advanced Level Examination



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

HC13

Monday 1 February 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 blue or black ink or 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.

Answer **all** questions.

There are 20 marks for each question.

- 1** Glynis is an adult female who has poor aerobic fitness. She decides to exercise regularly in order to improve her aerobic fitness, dynamic strength and her mobility.
- (a) (i) Explain what is meant by 'poor aerobic fitness' and give **one** example of how it might affect Glynis in her everyday life. *(4 marks)*
 - (ii) Outline **four** long-term physiological changes resulting from regular exercise which will help improve Glynis's aerobic fitness. *(4 marks)*
 - (b) (i) Explain what is meant by dynamic strength. Refer to **two** different examples in your answer. *(5 marks)*
 - (ii) Explain what is meant by mobility. *(3 marks)*
 - (iii) Explain how regular exercise might benefit Glynis socially. *(4 marks)*
- 2** Warm-up and warm-down programmes are principles of good practice when taking part in physical activity.
- (a) Suggest **two** different principles of good practice and give **one** different reason why each is important. *(4 marks)*
 - (b) Explain the following benefits of regular exercise:
 - (i) stress control *(8 marks)*
 - (ii) combating ageing. *(8 marks)*

3 The following data were obtained from four healthy 20-year-old females.

	Adult W	Adult X	Adult Y	Adult Z
Peak flow (dm ³ /min)	330	508	452	550
Body Mass Index (BMI)	17	31	22	23
Resting pulse rate (bpm)	64	68	84	70
Recovery time to resting rate after identical exercise (mins)	7	4	7	5

(a) Compare the four adult females in terms of the:

(i) peak flow measurements *(4 marks)*

(ii) BMI calculations *(4 marks)*

(iii) resting pulse rates *(4 marks)*

(iv) recovery times after identical exercise. *(4 marks)*

(b) (i) Outline how BMI is calculated. Include the appropriate units in your answer. *(3 marks)*

(ii) Give **one** limitation of using BMI. *(1 mark)*

4 Working long hours is a common barrier to an individual taking regular exercise.

(a) Give **three** other common barriers to individuals taking part in regular exercise. For each barrier suggest **one** different way it might be overcome. *(6 marks)*

(b) Ronan is an adult male who is overweight. He has type 1 diabetes and hypertension.

(i) Explain how regular exercise might improve or regulate Ronan's type 1 diabetes and his hypertension. *(9 marks)*

(ii) Outline a suitable exercise programme for Ronan. *(5 marks)*

END OF QUESTIONS

There are no questions printed on this page