

Centre Number						Candidate Number				
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Other Names										
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For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
TOTAL	



General Certificate of Education
Advanced Level Examination
June 2014

Health and Social Care

HSC07

Unit 7 Food and Fitness

Monday 16 June 2014 9.00 am to 11.00 am

You will need no other materials.

Time allowed

- 2 hours

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.
- If you need extra paper, use the Supplementary Answer Sheets.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You are reminded of the need for good English and clear presentation in your answers. Quality of Written Communication will be assessed in Question 4 (e).



J U N 1 4 H S C 0 7 0 1

Answer **all** questions in the spaces provided.

1 George is a 30-year-old male who exercises regularly and therefore has a high VO₂ max. He has a healthy balanced diet which is high in protein.

1 (a) Name **two** functions of protein. **[2 marks]**

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1 (b) Briefly outline how a high protein diet would be effective when exercising regularly. **[2 marks]**

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1 (c) State **two** sources of protein. **[2 marks]**

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1 (d) Explain what VO_2 max measures giving the units of measurement. In your answer, use George's VO_2 max as an example.

[5 marks]

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1 (e) Explain the long-term physiological effects of training regularly on George's aerobic fitness.

[9 marks]

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Turn over for the next question

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2 The following data was collected from four healthy 20-year-old females before and after participating in an identical standard exercise programme.

Table 1

	Female A	Female B	Female C	Female D
Body Mass Index (BMI)	23	18	31	20
Peak Flow (dm ³ /min)	410	460	320	520
Resting Pulse Rate (BPM)	65	70	85	90
Recovery time to resting pulse after identical exercise (minutes)	5	2	7	4

2 (a) Compare the data for the four females in **Table 1** with reference to the normal ranges for BMI.

[4 marks]

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2 (b) Compare the data for the four females in **Table 1** with reference to the normal ranges for resting pulse rates.

[4 marks]

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2 (c) Compare the data for the four females in **Table 1** with reference to the normal ranges for peak flow.

[4 marks]

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2 (d) What conclusions can be drawn about the relative fitness of the four females in **Table 1** on **page 6** from their pulse recovery time?

[4 marks]

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2 (e) Give **two** common barriers to individuals taking part in regular exercise. For each barrier suggest one different way it might be overcome.

[4 marks]

Barrier 1

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Overcome by

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Barrier 2

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Overcome by

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3 Jane is a 60-year-old female who has little aerobic fitness. She was recently diagnosed with hypertension and has been told she is overweight. Jane has been advised by her General Practitioner to exercise regularly.

3 (a) Discuss how exercising regularly may help Jane control her weight. Refer to physiological processes in your answer.

[7 marks]

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3 (c) Describe an exercise programme that would be suitable for Jane.

[5 marks]

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Turn over for the next question

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4 Simon is calcium deficient. He is obese and unfit. He has decided to take up regular exercise and has joined the local gym.

4 (a) Give **two** functions of calcium in the body.

[2 marks]

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4 (b) Describe the possible effect of calcium deficiency in the body.

[3 marks]

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4 (c) State **two** sources of calcium that Simon should consider adding to his diet. **[2 marks]**

Source 1

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Source 2

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4 (d) Explain why it is important that Simon sees his GP before he starts to exercise regularly. **[4 marks]**

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Extra space for question 4 (e)

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END OF QUESTIONS



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ANSWER IN THE SPACES PROVIDED**

