



Rewarding Learning

ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
2017

Centre Number

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Candidate Number

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# Nutrition and Food Science

Assessment Unit AS 1  
assessing  
Principles of Nutrition



\*SNF11\*

**[SNF11]**

**WEDNESDAY 17 MAY, MORNING**

## TIME

1 hour 30 minutes.

## INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page and on the Answer Booklet provided. Answer **all** questions in Section A and **two** questions from Section B. Write your answers to Section A in the Question Paper.

Write your answers to Section B in the Answer Booklet provided. Use the treasury tag provided to attach your Answer Booklet to the Question Paper at the end of the examination.

## INFORMATION FOR CANDIDATES

The total mark for this paper is 80.

Quality of written communication will be assessed in Questions **6–8**. Figures in brackets printed down the right side of pages indicate the marks awarded to each question or part question.

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	

Total Marks	

**Section A**

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

**1 (a) (i)** Circle a food below which is an example of a low biological value protein.

rice      cheese      eggs      fish      [1]

**(ii)** Suggest **two** foods that could be eaten, as part of a meal, to illustrate protein complementation.

\_\_\_\_\_ and \_\_\_\_\_ [1]

**(b)** Explain the importance of protein quality when planning meals for young children.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [2]

**(c)** What is the effect of illness on nitrogen balance in relation to protein requirements?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [2]

Examiner Only	
Marks	Remark

(d) Using the table below compare the nutritional value of Quorn and beef and explain the significance for health.

Food	Energy kcal/100g	Total Fat (g/100g)	Saturated fat (g/100g)	Cholesterol (mg/100g)	%Energy from Total Fat	Fibre (g/100g)
Quorn mince (frozen)	94	2	0.5	0	19	6.0
Beef mince (raw)	225	16.2	6.9	60	65	0

© [http://www.mycoprotein.org/what\\_is\\_mycoprotein/fat.html](http://www.mycoprotein.org/what_is_mycoprotein/fat.html)

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[5]

Examiner Only	
Marks	Remark

2 (a) (i) Explain the term glycaemic loading in relation to carbohydrate absorption.

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[4]

(ii) Assess the effects on health of consuming foods with a different glycaemic index, such as those in the table below.

Food	Glycaemic Index per average portion
White plain baguette	95
Whole wheat bread	71
Cornflakes	93
All Bran	55
White rice	89
Brown rice	50
Apple	39
Ripe banana	62
Grapefruit	25

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[5]

Examiner Only	
Marks	Remark

(b) Identify **two** possible problems that could occur if too much fibre is consumed.

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[2]

(c) State **two** food sources of intrinsic sugars.

(i) \_\_\_\_\_ (ii) \_\_\_\_\_ [2]

(d) Using the table below justify the decision to choose a banana rather than a chocolate bar as the preferred source of energy.

Food	Portion size	Energy (kcal)	Sugar (g)
Banana	100g	81	18
Chocolate bar	45g	234	25

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[5]

Examiner Only	
Marks	Remark

3 (a) Discuss the effects of a deficiency of vitamin B<sub>1</sub>.

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[3]

(b) Explain the role of potassium in the body.

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[3]

(c) Name **three** factors that enhance the absorption of calcium.

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[3]

(d) Propose and justify the nutritional advice you would give to a pregnant woman in relation to vitamins.

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[5]

Examiner Only	
Marks	Remark

4 (a) Discuss the importance of achieving an adequate energy intake for a frail elderly person during an acute illness.

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[4]

(b) Explain why a supplement of vitamin K is usually given to a newborn infant.

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[2]

(c) State **two** reasons why children might be at risk of developing rickets.

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[2]

Examiner Only	
Marks	Remark

## 5 Discuss the role of essential fatty acids in the diet.

Examiner Only	
Marks	Remark

## Section B

Quality of written communication is assessed in this section.

Answer **two** out of three questions from this section.

Write your answers in the Answer Booklet provided.

**6** Explain how Dietary Reference Values (DRVs) and Estimated Average Requirements (EARs) should be used to evaluate diets. [12]

**7** Consider the nutritional benefits derived from consuming a range of fluids, other than water. [12]

**8** Describe the specific nutritional requirements of a teenager. [12]

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**THIS IS THE END OF THE QUESTION PAPER**

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