

# **X118/301**

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NATIONAL  
QUALIFICATIONS  
2009

TUESDAY, 9 JUNE  
1.00 PM – 3.00 PM

HOME ECONOMICS  
HEALTH AND FOOD  
TECHNOLOGY  
HIGHER

80 marks are allocated to this paper.

This paper consists of **two** sections.

Candidates should attempt the following:

**Section A**—All questions

**Section B**—Question 1 and any other **two** questions.

The breakdown of Knowledge and Understanding (**KU**) and Evaluation (**EV**) marks are indicated beside each question.



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## SECTION A

Attempt ALL questions.

*You should spend approximately 30 minutes on this part of the paper.*

	<i>Marks</i>
1. State <b>one</b> function of folic acid.	1
2. Name the process when yeast, under the right conditions, produces carbon dioxide and alcohol.	1
3. Name <b>one</b> essential fatty acid.	1
4. State the legal minimum temperature required for the safe reheating of food.	1
5. Identify <b>one</b> function of dietary fibre (NSP).	1
6. What does the abbreviation <b>MAP</b> stand for?	1
7. State <b>one</b> effect of dry heat on sugar.	1
8. Identify <b>one</b> sensory test.	1
9. State <b>two</b> dietary causes of coronary heart disease.	2
10. Give <b>one</b> advantage and <b>one</b> disadvantage of on-line shopping for food.	2
11. Give <b>two</b> benefits of a school breakfast club.	2
12. State <b>two</b> health benefits of a diet rich in the ACE vitamins.	2
13. Explain the following terms.	
(i) Intrinsic sugars	
(ii) Extrinsic sugars	2
14. State <b>two</b> terms of the Trade Descriptions Act 1968.	2
	<b>(20)</b>

**[Turn over**

## SECTION B

Attempt **THREE** questions from this section: **Question 1** and any other **TWO** questions.

*You should spend approximately 30 minutes on each question.*

*Marks*

1. (a) The table opposite shows a day's nutrient content of meals eaten by a male primary school child.
- Using your knowledge of nutrition and the information provided, evaluate the suitability of this day's nutritional intake. **6 EV**
- (b) Explain **four** reasons for obesity in primary school children. **4 KU**
- (c) Identify and explain **three** factors which may contribute to a deficiency in iron. **6 KU**
- (d) Evaluate the contribution of bread in the diet. **4 EV**
- (20)**

1. (continued)

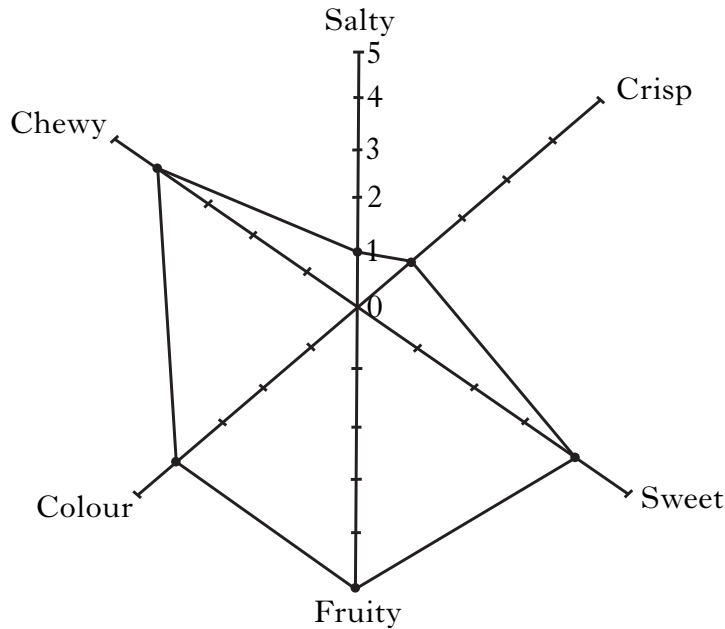
<i>Nutrient content of a day's meals eaten by a male primary school child</i>							
<i>Energy</i> (kJ)      (kcal)		<i>Protein</i> (g)	<i>Calcium</i> (mg)	<i>Vitamin C</i> (mg)	<i>Iron</i> (mg)	<i>Vitamin B1</i> (mg)	<i>Vitamin A</i> (µg)
9270	2220	24.8	500	32	8.2	0.9	400

<i>Reference Nutrient Intake for Selected Nutrients in UK (per day) for male children aged 7-10</i>					
<i>Protein</i> (g)	<i>Calcium</i> (mg)	<i>Vitamin C</i> (mg)	<i>Iron</i> (mg)	<i>Vitamin B1</i> (mg)	<i>Vitamin A</i> (µg)
28.3	550	30	8.7	0.7	500

<i>Estimated Average Requirement for Energy in the UK (per day) for male children aged 7-10</i>	
kJ	kcal
8240	1970

[Turn over

2. (a) A food manufacturer plans to develop a cereal bar.  
Identify and explain **three** stages in the development of this snack. **6 KU**
- (b) The star profile below shows the results of testing a cereal bar.  
Evaluate the suitability of this cereal bar for teenagers.



**5 EV**

- (c) Explain **two** reasons why a food manufacturer would use disassembly. **2 KU**
- (d) The following marketing techniques are used to promote the cereal bar.
- (i) Point of sale display
  - (ii) Buy one get one free
  - (iii) In-store tasting
  - (iv) TV advertising

Evaluate the impact of **each** of these techniques on the consumer.

**4 EV**

- (e) Using Hazard Analysis and Critical Control Point (HACCP), explain **one** control measure which the cereal bar manufacturer should take at **each** of the following stages.
- (i) Storage
  - (ii) Preparation
  - (iii) Distribution

**3 KU**

**(20)**

3. (a) Evaluate the suitability of the following meal in relation to **different** Scottish dietary targets.
- Grilled breast of chicken brushed with garlic butter
  - Baked potato
  - Carrots
- 4 EV**
- (b) Identify **one** cause and **two** control measures for **each** of the following bacteria.
- (i) Salmonella
  - (ii) Campylobacter
- 6 KU**
- (c) Explain how **each** of the following areas of the Food Safety Act 1990 protects the consumer.
- (i) Labelling
  - (ii) Additives and contaminants
- 2 KU**
- (d) The Food Safety Act 1990 also covers Public Health & Hygiene.  
Explain **four** ways in which an Environmental Health Officer would enforce this Act.
- 4 KU**
- (e) Evaluate **each** of the following for the consumer.
- (i) Fair Trade products
  - (ii) Organic produce
- 2 EV**  
**2 EV**  
**(20)**

**[Turn over for Question 4 on Page eight**

4. (a) Evaluate how **each** of the following factors may influence a consumer's choice of food.
- (i) Working hours
  - (ii) Nutritional knowledge
  - (iii) Preparation and cooking skills
  - (iv) Foreign travel
- 4 EV**
- (b) Identify and explain **three** mechanical methods of introducing air in cake making.
- 6 KU**
- (c) Explain the effects of **storage, preparation** and **cooking** on fats.
- 3 KU**
- (d) Explain how **each** of the following technological developments are used in food production.
- (i) Ultra Heat Treated (UHT)
  - (ii) Sugar substitutes
- 4 KU**
- (e) Evaluate the effect of food packaging on the environment.
- 3 EV**
- (20)**

[END OF QUESTION PAPER]