

X118/301

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

[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

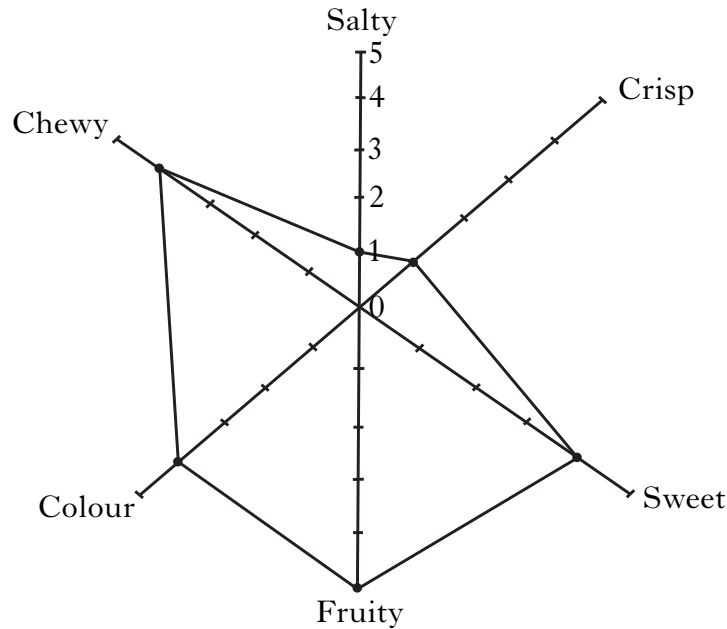
2. (a) A food manufacturer plans to develop a cereal bar.

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]