

X118/301

NATIONAL
QUALIFICATIONS
2010

TUESDAY, 8 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. Name one source of total complex carbohydrate.	1
2. Identify the term used to describe the swelling and bursting of starch granules.	1
3. Name one function of vitamin E.	1
4. State one factor which hinders the absorption of calcium.	1
5. Give one food source of listeria.	1
6. What does the abbreviation EU stand for?	1
7. State one rule to ensure effective sensory testing.	1
8. Give one benefit of irradiated foods.	1
9. Identify two reasons for the use of additives in food production.	2
10. State two reasons why manufacturers use market research.	2
11. State two areas of responsibility for the Department for Environment, Food and Rural Affairs (DEFRA).	2
12. Explain what happens to bacteria at: (i) -18°C ; (ii) 75°C .	2
13. State two advantages of functional foods.	2
14. Give one advantage and one disadvantage of hydroponics.	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 an overweight female teenager.

Using your knowledge of nutrition, and the information provided, evaluate the suitability of this day's nutritional intake.

6 EV

- (b) Explain **four** changes that have been made in schools as a result of the Hungry for Success initiative.

4 KU

- (c) Evaluate the contribution of fat as a nutrient in the diet.

4 EV

- (d) Identify and explain **three** dietary factors which may contribute to hypertension.

6 KU

(20)

1. (a) (continued)

<i>Nutrient content of a day's meals eaten by an overweight female teenager</i>							
<i>Energy</i>		<i>Protein</i> (g)	<i>Iron</i> (mg)	<i>Vitamin C</i> (mg)	<i>Calcium</i> (mg)	<i>Folic acid</i> (µg)	<i>Vitamin A</i> (µg)
(kJ)	(kcal)						
11,100	2652	55	12·6	31	863	182	652

<i>Reference Nutrient Intake for Selected Nutrients in the UK (per day) for females aged 15–18</i>					
<i>Protein</i> (g)	<i>Iron</i> (mg)	<i>Vitamin C</i> (mg)	<i>Calcium</i> (mg)	<i>Folic acid</i> (µg)	<i>Vitamin A</i> (µg)
45·0	14·8	40	800	200	600

<i>Estimated Average Requirement for Energy in the UK (per day) for females aged 15–18</i>	
kJ	kcal
8830	2110

[Turn over

2. (a) Explain **each** of the following stages in the development of a new Chinese dish.

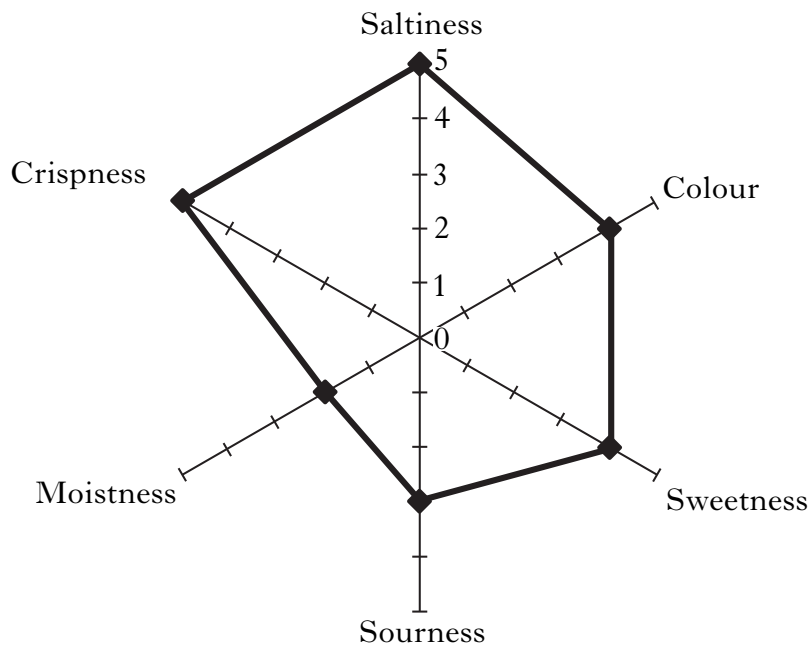
- (i) Concept generation
- (ii) Product testing
- (iii) Marketing plan
- (iv) Launch

4 KU

(b) The star profile below shows the results of testing the Chinese dish.

Evaluate the suitability of this Chinese dish for the elderly.

5 EV



(c) Evaluate the use, to the consumer, of nutritional information on food products.

4 EV

(d) Explain the effects of storage, preparation and cooking on Vitamin B1 (thiamine).

3 KU

(e) Explain **two** ways in which **each** of the following legislation protects the consumer when purchasing food.

- (i) The Trade Descriptions Act (1968)
- (ii) The Food Hygiene (Scotland) Regulations (2005)

2 KU

2 KU

(20)

3. (a) Explain **four** reasons for the **increase** in food poisoning. **4 KU**
- (b) Identify and explain **two** functional properties of eggs. **4 KU**
- (c) Evaluate the nutritional suitability of the following meal for a vegetarian.
- Bean Burger
 - Wholemeal roll
 - Green salad
 - Lemon meringue pie and cream **4 EV**
- (d) Explain the benefits of **each** of the following technological developments in food production.
- (i) Fat replacers
 - (ii) Myco-proteins **4 KU**
- (e) Evaluate the influence of television on consumers' choice of food. **4 EV**
- (20)**

[Turn over for Question 4 on *Page eight*

4. (a) Explain **one** cause and **one** effect on health of **each** of the following dietary diseases.
- (i) Dental caries
 - (ii) Diverticulitis
- 4 KU
- (b) Evaluate breastfeeding for **each** of the following.
- (i) The mother
 - (ii) The baby
- 4 EV
- (c) Evaluate ready meals in relation to **different** Scottish dietary targets.
- 4 EV
- (d) Explain how **each** of the following may influence food choice.
- (i) Available income
 - (ii) Environmental issues
 - (iii) Time available for preparation and cooking
 - (iv) Cultural influences
- 4 KU
- (e) Explain **four** functions of the Food Standards Agency (FSA).
- 4 KU
- (20)

[END OF QUESTION PAPER]