

X118/12/01

NATIONAL THURSDAY, 3 MAY
QUALIFICATIONS 1.00 PM – 3.00 PM
2012

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.

Marks

- | | |
|-------------------------------------------------------------------------------|-------------|
| 1. State one source of low biological value (LBV) protein. | 1 |
| 2. Name one fat soluble vitamin. | 1 |
| 3. Identify one source of salmonella. | 1 |
| 4. Give one statutory point of information on a food label. | 1 |
| 5. State one way of incorporating air into a product to be baked. | 1 |
| 6. What does the abbreviation TVP stand for? | 1 |
| 7. Explain the term intrinsic sugar. | 1 |
| 8. Give one responsibility of the Meat Hygiene Service (MHS). | 1 |
| 9. State two advantages of breastfeeding. | 2 |
| 10. Give two benefits of a vegetarian diet. | 2 |
| 11. State two advantages of genetically modified (GM) foods. | 2 |
| 12. Give two benefits of school meals. | 2 |
| 13. State two advantages of hydroponics. | 2 |
| 14. Give one advantage and one disadvantage of market research. | 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 40 year old male.
Using your knowledge of nutrition, and the information provided, evaluate the suitability of this day's nutritional intake. **6 EV**
- (b) Explain the inter-relationship between **each** of the following.
- (i) Carbohydrates and vitamin B complex
 - (ii) NSP and water **3 KU**
- (c) Explain the effects of **storage**, **preparation** and **cooking** on vitamin C. **3 KU**
- (d) Evaluate the contribution of oily fish in the diet. **4 EV**
- (e) Identify and explain **two** factors, **other than diet**, which can contribute to coronary heart disease (CHD). **4 KU**
- (20)**

1. (a) (continued)

<i>Nutrient content of a day's meals eaten by a 40 year old male</i>							
<i>Energy</i>		<i>Protein</i> (g)	<i>Vitamin B1</i> (mg)	<i>Vitamin C</i> (mg)	<i>Iron</i> (mg)	<i>Sodium</i> (mg)	<i>Saturated fat</i> (%)
(MJ)	(kcal)						
9.71	2330	65	1.3	45	8.0	1900	15

<i>Reference Nutrient Intake for Selected Nutrients in the UK (per day) for males aged 19–50</i>				
<i>Protein</i> (g)	<i>Vitamin B1</i> (mg)	<i>Vitamin C</i> (mg)	<i>Iron</i> (mg)	<i>Sodium</i> (mg)
55.5	1.0	40	8.7	1600

<i>Estimated Average Requirement for Energy in the UK (per day) for males aged 19–50</i>	
<i>Energy</i>	
MJ	kcal
10.60	2550

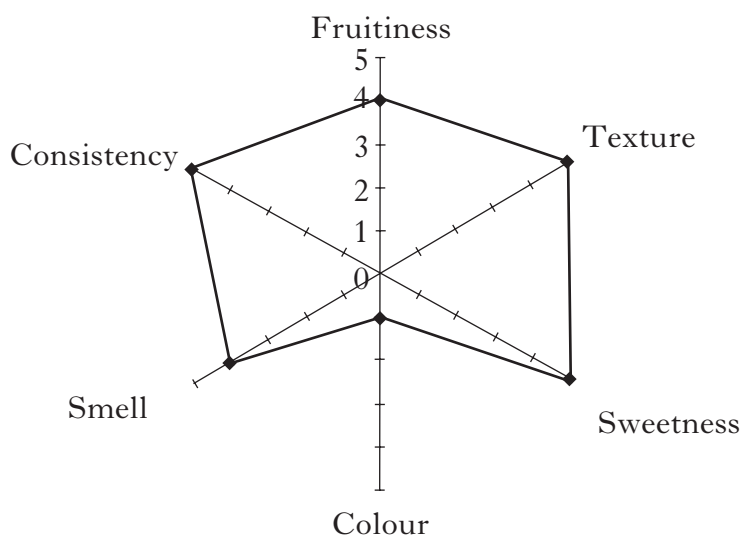
[Turn over

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

- (i) Concept screening
- (ii) Prototype production
- (iii) First production run
- (iv) Marketing plan

4 KU

(b) The star profile below shows the results of testing a yoghurt. Evaluate the suitability of the yoghurt for a teenager.



5 EV

(c) Identify and explain **three** factors which may help to prevent osteoporosis.

6 KU

(d) Evaluate **each** of the following technological developments to the consumer.

- (i) Extrusion cooking
- (ii) Sugar substitutes

3 EV

(e) Explain **two** ways in which the Food Safety Act 1990 protects the consumer.

2 KU

(20)

Marks

3. (a) Identify and explain **three** factors which influence consumer choice of food. **6 KU**
- (b) Evaluate **each** of the following ways food manufacturers are helping consumers meet the Scottish Dietary Targets.
- (i) Increasing fruit and vegetables
 - (ii) Reducing salt intake **4 EV**
- (c) Evaluate the nutritional suitability of the following meal for a child.
- Cream of vegetable soup
 - Spaghetti bolognese and garlic bread
 - Glass of fresh orange juice **4 EV**
- (d) Explain how **each** of the following functional properties may be used in food manufacture.
- (i) Crystallisation
 - (ii) Coagulation **4 KU**
- (e) Explain **two** responsibilities of the Trading Standards Department in protecting the consumer. **2 KU**
- (20)**

[Turn over for Question 4 on *Page eight*

4. (a) Evaluate how **each** of the following ingredients used to make a pizza base affect the finished product.
- (i) Strong wholemeal flour
 - (ii) Sugar
 - (iii) Salt
 - (iv) Yeast
- 4 EV**
- (b) Using Hazard Analysis Critical Control Point (HACCP), explain **one** control measure for **each** of the following stages in the production of a pizza.
- (i) Purchase of ingredients
 - (ii) Storage of ingredients
 - (iii) Preparation of ingredients
 - (iv) Packaging
- 4 KU**
- (c) Explain **two** reasons why a food manufacturer would use sensory testing. **2 KU**
- (d) Identify and explain **three** methods of preserving food. **6 KU**
- (e) Evaluate **each** of the following foods to the consumer.
- (i) Organic foods
 - (ii) Fair Trade foods
- 4 EV**
- (20)**

[END OF QUESTION PAPER]