X118/301

NATIONAL QUALIFICATIONS 2007

9.00 AM - 11.00 AM

WEDNESDAY, 30 MAY 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.

1.	Name two sources of high biological value protein (HBV).	Marks 1
2.	Identify two symptoms of food poisoning.	1
3.	State two effects of heat on protein.	1
4.	Name two food products produced by extrusion.	1
5.	Name the manufacturing process that changes oil into solid fat.	1
6.	What does the abbreviation TVP stand for?	1
7.	Name the organisation responsible for enforcing the Weights and Measures Act 1963.	1
8.	State one responsibility of the Food Standards Agency.	1
9.	State two advantages of breastfeeding.	2
10.	State two areas covered by the Food Safety Act 1990.	2
11.	Identify two effects on health which may result from obesity.	2
12.	Give one advantage and one disadvantage of functional foods.	2
13.	Explain each of the following terms.	
	(i) Aerobic bacteria	
	(ii) Anaerobic bacteria	2
14.	State two benefits of the Hungry for Success initiative.	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.

(<i>a</i>)	The table opposite shows a day's nutrient content of meals eaten by a 16 year old boy who is a vegetarian.	
	Using your knowledge of nutrition and the information provided, evaluate the suitability of this day's nutritional intake.	6 EV
(<i>b</i>)	List a set of four practical guidelines to help reduce the risk of dental caries in a teenager.	4 KU
(<i>c</i>)	Evaluate the dietary suitability of the following meal for a teenager.	
	Sardine pâté and wholemeal toast	
	Spaghetti bolognese with broccoli	4 EV
(<i>d</i>)	Explain the inter-relationship between each of the following.	
	(i) NSP and water	
	(ii) Carbohydrates and vitamin B complex	4 KU
(<i>e</i>)	Evaluate sodium in the diet.	2 EV (20)
	 (a) (b) (c) (d) (e) 	 (a) The table opposite shows a day's nutrient content of meals eaten by a 16 year old boy who is a vegetarian. Using your knowledge of nutrition and the information provided, evaluate the suitability of this day's nutritional intake. (b) List a set of four practical guidelines to help reduce the risk of dental caries in a teenager. (c) Evaluate the dietary suitability of the following meal for a teenager. (c) Evaluate the dietary suitability of the following meal for a teenager. (d) Explain the inter-relationship between each of the following. (i) NSP and water (ii) Carbohydrates and vitamin B complex (e) Evaluate sodium in the diet.

1. (continued)

	Nutrient content of a day's meals eaten by a 16 year old boy						
Ene (kJ)	ergy (kcal)	Protein (g)	Iron (mg)	Vitamin C (mg)	Calcium (mg)	Saturated Fat (g)	Vitamin A (µg)
12540	3000	43	7	78	1200	83	375
% of tota intake	l energy	6				25	

Reference Nutrient Intake for Selected Nutrients in UK (per day) for males aged 15–18						
Protein (g)	Iron (mg)	Vitamin C (mg)	Calcium (mg)	Vitamin A (µg)		
55.2	11.3	40	1000	700		

Estimated Average Requirement for Energy in UK (per day) for males aged 15–18		
kJ	kcal	
11510	2755	

[Turn over

2.	(a)	A food manufacturer plans to develop a low cost fish product aimed at the student market. Identify and explain four stages in the development of this product.	6 KU
	(<i>b</i>)	Name and explain two sensory tests that could be used to evaluate the suitability of this fish product.	3 KU
	(<i>c</i>)	Identify and explain two types of market research which could be used by a food manufacturer.	3 KU
	(<i>d</i>)	Evaluate the impact of statutory food labelling for consumers when choosing food.	4 EV
	(<i>e</i>)	Evaluate the use of genetically modified (GM) food.	4 EV (20)

Marks

(<i>a</i>)	Explain how each of the following factors influences a consumer's choice of food.			
	(i)	Available income		
	(ii)	Peer pressure		
	(iii)	Environmental issues		
	(iv)	Geographical location	4 KU	
(b)	Ident consu	tify and explain four ways in which food manufacturers are helping inners to meet Scottish Dietary Targets.	6 KU	
(c)	Evalu food	nate the use of Hazard Analysis Critical Control Point (HACCP) in manufacture.	4 EV	
(<i>d</i>)	Evalı	ate the use of artificial sweeteners in food products.	3 EV	
(<i>e</i>)	Expla	ain the use of each of the following in food preservation.		
	(i)	Salt		
	(ii)	pH		
	(iii)	Freeze-drying	3 KU (20)	

[Turn over for Question 4 on Page eight

Marks

3.

4.	(<i>a</i>)	Evaluate how each of the following ingredients used in bread making affect the finished product.	
		(i) Strong wholemeal flour	
		(ii) Sugar	
		(iii) Salt	
		(iv) Yeast	4 EV
	(<i>b</i>)	Identify and explain four factors, other than those relating to diet, which could contribute to coronary heart disease (CHD).	6 KU
	(<i>c</i>)	Explain the effects of storage , preparation and cooking on Vitamin C.	3 KU
	(<i>d</i>)	Explain three areas of responsibility of the Department for Environment, Food and Rural Affairs (DEFRA).	3 KU
	(<i>e</i>)	Evaluate the role of each of the following.	
		(i) Colourings	
		(ii) Emulsifiers	4 EV
			(20)

Marks

[END OF QUESTION PAPER]