

**General Certificate of Secondary Education
Home Economics (Food and Nutrition)**

B003

Unit B003: Principles of Food and Nutrition

Specimen Paper

Time: 1 hour 30 minutes

Candidates answer on the question paper.

Additional materials: None required

Candidate
Forename

Candidate
Surname

Centre Number

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Candidate
Number

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INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do not write outside the box bordering each page.
- Write your answer to each question in the space provided.

INFORMATION FOR CANDIDATES

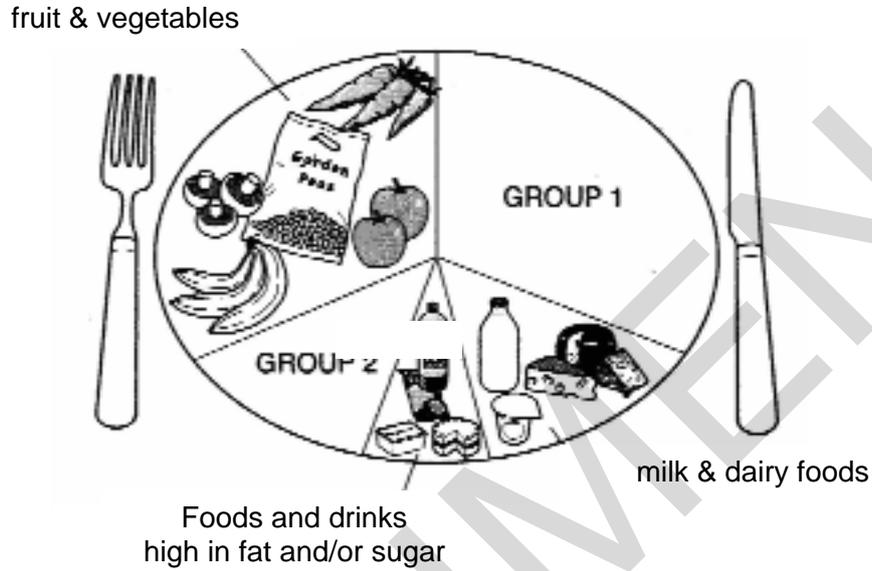
- The number of marks for each question is given in brackets [] at the end of each question or part question.
- Your Quality of Written Communication is assessed in question 5.
- The total number of marks for this paper is 80.

FOR EXAMINER'S USE	
1	
2	
3	
4	
5	
TOTAL	

This document consists of **10** printed pages and **2** blank pages.

Answer **all** questions

- 1 Different groups of food are needed for good health.
Look at the food groups on the Eatwell plate below.



- (a) Two groups of food are missing from the plate.
Name **one** food from each group.

(i) Group 1 [1]

(ii) Group 2 [1]

- (b) (i) How many servings of fruit and vegetables are we advised to eat each day?

..... [1]

- (ii) Give **three** reasons for this advice

1.....

2.....

3..... [3]

(c) Vitamin C is often lost during the preparation and cooking of fruit and vegetables.

Give **three** ways of reducing this loss.

- 1
- 2
- 3 [3]

(d) People are advised to eat less fat.

Give **three** ways of reducing the amount of fat eaten.

- 1
- 2
- 3 [3]

(e) Protein foods are needed as part of a balanced diet.

(i) Give **one** example of a HBV (High Biological Value) protein food.

- 1..... [1]

(ii) Give **one** example of a LBV (Low Biological Value) protein food.

- 1 .. [1]

(f) Explain what points need to be considered when feeding young children.

-
-
-
-
-
-
- [6]

[Total: 20]

[Turn over

2 (a) Look at the recipe below for making bread.

BREAD RECIPE	
500g	strong plain flour
10g	salt
1	sachet easy dried yeast
250ml	water (37 °C)
Oven Temperature: 200 °C to 220 °C Gas Mark 6-8	

(i) State how the basic recipe could be adapted to add more fibre (NSP).
..... [1]

(ii) Why is the temperature of the water important?
..... [1]

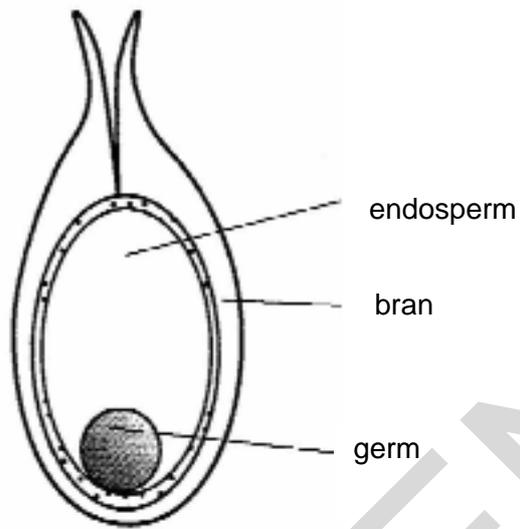
(iii) Give **one** reason why strong plain flour is used.
..... [1]

(b) (i) Give **one** reason why a person with coeliac disease could **not** eat this bread.
..... [1]

(ii) Name **two** other foods that coeliacs should **not** eat.
1
2 [2]

(c) Describe the qualities of a successfully cooked loaf of bread.
.....
.....
.....
.....
.....
..... [6]

(d) The diagram below shows a wheat grain.



Name the part of the grain that:

(i) provides starch.

..... [1]

(ii) is used to make wholemeal flour

..... [1]

(e) Name a type of bread that would be traditionally served with chicken madras and rice.

..... [1]

[Total: 15]

3 (a) A refrigerator is shown below.

Complete the labels on the refrigerator to show the correct place to store each of the following foods:

eggs has been completed for you

- beansprouts
- carton of fresh milk
- raw minced beef
- ice cream



[4]

(b) (i) Micro-organisms can cause food spoilage.
Bacteria is one type of micro-organism.
Name **two** more micro-organisms.

- 1
- 2 [2]

(ii) Give **three** conditions needed for bacteria to grow.
The first one has been completed for you.

- 1 Moisture.....
- 2
- 3
- 4 [3]

(c) Describe good hygiene practice in the fresh food section of a supermarket.

-
-
-
-
-
- [6]

[Total: 15]

5 Read the case study below.

CASE STUDY
TONY Age 48. Overweight. Married. Two teenage children. Occupation: computer operator. Drives two miles to work. Hobbies: watching T.V. socialising with friends.
TYPICAL DAILY FOOD INTAKE
Breakfast: cornflakes with milk, buttered toast and marmalade.
Mid morning: Doughnut and coffee.
Lunch: Sandwiches (white bread) – egg, ham or tuna, crisps, chocolate bar.
Afternoon: Fizzy drink, cake.
Evening meal: lasagne with chips or take-away.

The company Tony works for insists on a yearly medical examination. At his recent examination the doctor advised changes to his diet and lifestyle.

- Describe the problems with Tony’s current diet and lifestyle.
- Explain the changes he needs to make.

The quality of your written communication is assessed in your answer to this question.

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SPECIMEN

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OXFORD CAMBRIDGE AND RSA EXAMINATIONS

General Certificate of Secondary Education

HOME ECONOMICS: FOOD AND NUTRITION B003

UNIT B003: PRINCIPLES OF FOOD AND NUTRITION

Specimen Mark Scheme

The maximum mark for this paper is 80.

SPECIMEN

Question Number	Answer	Marks	
1 (a)	Two groups of food are missing from the plate. Name one food from each group.		
(i)	ONE mark for correct answer. Group 1 bread rice, potatoes, pasta or good examples of starchy food.	[1x1]	[1]
(ii)	ONE mark for correct answer. Group 2 Meat, fish, eggs, beans or examples of non dairy sources of protein.	[1x1]	[1]
(b)(i)	How many servings of fruit and vegetables are we advised to eat each day? ONE mark for correct answer 5 – 10 servings	[1x1]	[1]
(ii)	Give <u>three</u> reasons for this advice. ONE mark for each correct answer THREE required Vitamins. Minerals. Fibre. (NSP) Add colour, variety, texture, flavour to diet. Low in calories. Fill you up, but low in calories. Antioxidants – protect against cancer, coronary heart disease.	[3x1]	[3]
(c)	Vitamin C is often lost during the preparation and cooking of fruit and vegetables. Give <u>three</u> ways of reducing this loss. ONE mark for each correct answer. THREE required Do not prepare too long before cooking/Prepare just before you need them. Tear leaves (rather than cut). Avoid long storage. Peel very thinly. Leave skin on if appropriate. Cook as quickly as possible in a small amount of water/prevent leaching. Steam or microwave. Avoid exposing too much of the surface area/do not chop into very small pieces. Serve as soon as possible after cooking, do not keep warm after cooking. Eat raw when appropriate. Use vegetable water for soup and sauces. Do not leave soaking/standing in water	[3x1]	[3]

Question Number	Answer	Marks													
(d)	<p>People are advised to eat less fat. Give <u>three</u> ways of reducing the amount of fat eaten. ONE MARK for each correct answer. THREE required.</p> <p>Cook without fat. No extra fat added during cooking. Remove visible fat from meat – skin poultry – fat on bacon. Less snack foods, cakes, biscuits and chocolate. Use lower fat spreads. Skimmed and semi skimmed milk. Reduced fat cheese, or use less strong flavoured cheese. Cut down on fried foods/grill not fry. Low fat yoghurt.</p>	[3x1]	[3]												
(f)	<p>Explain what points need to be considered when feeding young children.</p> <p>High Level Response 5-6</p> <p>The candidate will give several points to consider when feeding young children and explain why each is important. Specialist terms will be used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>Medium Level Response 3-4</p> <p>The candidate will give some points to consider when feeding young children but may lack specific detail of examples. There will be some use of specialist terms although these may not be used appropriately. The information will be presented for the most part in a structured format. There may be occasional errors in spelling, punctuation and grammar.</p> <p>Low Level Response 0-2</p> <p>The candidate may give limited or confused information about the needs of feeding young children. Answers may be in the form of a list with little or no description. There will be little or no use of specialist terms. Errors of spelling, punctuation and grammar may be intrusive.</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;">Point</td> <td style="width: 50%; vertical-align: top;">Explanation</td> </tr> <tr> <td>Attractive/colourful appearance and variety of food</td> <td>To encourage good eating habits</td> </tr> <tr> <td>Small portions</td> <td>Manageable/not overfeed</td> </tr> <tr> <td>Balanced meals/range of nutrients and good practice</td> <td>Ensure a healthy balanced diet</td> </tr> <tr> <td>Low in sugar and salt problems</td> <td>Prevent associated health</td> </tr> <tr> <td>Foods rich in calcium</td> <td>To encourage growth of strong bones and teeth</td> </tr> </table>	Point	Explanation	Attractive/colourful appearance and variety of food	To encourage good eating habits	Small portions	Manageable/not overfeed	Balanced meals/range of nutrients and good practice	Ensure a healthy balanced diet	Low in sugar and salt problems	Prevent associated health	Foods rich in calcium	To encourage growth of strong bones and teeth	[3x2]	[6]
Point	Explanation														
Attractive/colourful appearance and variety of food	To encourage good eating habits														
Small portions	Manageable/not overfeed														
Balanced meals/range of nutrients and good practice	Ensure a healthy balanced diet														
Low in sugar and salt problems	Prevent associated health														
Foods rich in calcium	To encourage growth of strong bones and teeth														

	<p>Protein foods Variety of tastes and textures different foods Limit starchy fibre rich foods unable to eat other nutrients Stress free/fun meal times pleasant experience Eat a variety of fruit and vegetables – 5 a day associated health problems. Eat in place of sweets etc Eat with older children and adults socialising Nutritious drinks high sugar drinks Encourage taking part in food preparation</p>	<p>To encourage growth and repair Encourage eating a diet of To avoid filling up and being Associate meals/eating with a To prevent Copy good eating habits and Part of a balanced diet. Replace Food education</p>		
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SPECIMEN

Question Number	Answer	Marks	
(e)(i)	<p>Protein is needed as part of a balanced diet Give <u>one</u> example of a HBV (High Biological Value) protein food. ONE MARK for correct answer. .</p> <p>Meat, fish, milk, cheese, eggs, soya</p>	[1x1]	[1]
(ii)	<p>Give <u>one</u> example of a LBV (Low Biological Value) protein food. ONE MARK for correct answer.</p> <p>Peas, beans, lentils/pulses, cereals, rice, wheat flour, pasta, nuts and seeds, gelatine</p>	[1x1]	[1]
Question 1 Total		[20]	

Question Number	Answer	Marks	
2(a)(i)	<p>State how the basic recipe could be adapted to add more fibre (NSP).</p> <p>ONE mark for each correct answer. THREE required</p> <p>Add or substitute some of the flour for: whole meal flour/nuts and seeds. Wheatmeal flour. Granary Flour. Bran</p>	[1]	[1]
(ii)	<p>Why is the temperature of the water important?</p> <p>Hot – destroy yeast/ cold slows activity correct temperature to activate the yeast.</p>	[1]	[1]
(iii)	<p>Give <u>one</u> reason why strong plain flour is used.</p> <p>High gluten content – strong elastic dough, enables CO₂ to be held in small pockets.</p>	[1]	[1]
(b)(i)	<p>Give <u>one</u> reason why a person with coeliac disease could <u>not</u> eat this bread.</p> <p>Sensitivity to the gluten</p>	[1]	[1]
(ii)	<p>Name <u>two</u> other foods that coeliacs should <u>not</u> eat.</p> <p>ONE mark for each correct answer. Two required</p> <p>Accept any named wheat product Barley, Rye, Oats</p>	[2x1]	[2]
(c)	<p>Describe the qualities of a successfully cooked loaf of bread.</p> <p>High Level Response 5-6</p> <p>The candidate will describe several qualities of a successfully cooked loaf of bread. Specialist terms will be used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>Medium Level Response 3-4</p> <p>The candidate will describe some qualities of a successfully cooked loaf of bread. There will be some use of specialist terms although these may not be used appropriately. The information will be presented for the most part in a structured format. There may be occasional errors in spelling, punctuation and grammar.</p>	[6x1]	[6]

Question Number	Answer	Marks	Question Number
	<p>Low Level Response 0-2</p> <p>The candidate may give limited or confused information about the qualities of a successfully cooked loaf of bread. Answers may be in the form of a list with little or no description. There will be little or no use of specialist terms. Errors of spelling, punctuation and grammar may be intrusive.</p> <p>ONE mark for each correct answer. SIX required, e.g.</p> <p>Evenly/well risen Even colour. Appropriate browning Evenly cooked. Hollow sound when tapped on base. Not doughy Good flavour. Not “yeasty” flavour Light texture/not dense heavy texture/ soft.</p>		
(d)(i)	<p>Name the part of the grain that provides starch.</p> <p>Endosperm</p>	[1]	[1]
(ii)	<p>Name the part of the grain that is used to make wholemeal flour.</p> <p>Whole grain/all of it/100%/ Bran</p>	[1]	[1]
(e)	<p>Name a type of bread that would traditionally be served with chicken madras and rice.</p> <p>Naan bread, chappatis and poppodoms.</p>	[1]	[1]
	Question 2 Total	[15]	

Question Number	Answer	Marks	
3(a)	<p>Complete the labels on the refrigerator to show the correct place to store each of the following foods: ONE mark for each correct answer. FOUR required</p> <p>Beansprouts – salad drawer Milk – door Minced beef - bottom shelf Ice cream – freezer</p>	[4x1]	[4]
(b)(i)	<p>Name <u>two</u> more micro-organisms. ONE mark for each correct answer. TWO required.</p> <p>Moulds Yeast</p>	[2x1]	[2]
(ii)	<p>Give <u>three</u> conditions needed for bacteria to grow. The first one has been completed for you. One mark for each correct answer. THREE required</p> <p>Food. The correct temperature. Time.</p>	[3x1]	[3]
(c)	<p>Describe good hygiene practice in the fresh food section of a supermarket.</p> <p>High Level Response 5-6</p> <p>The candidate will describe several good food hygiene practices in the fresh food section of a supermarket. Specialist terms will be used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>Medium Level Response 3-4</p> <p>The candidate will describe some good food hygiene practices in the fresh food section of a supermarket. There will be some use of specialist terms although these may not be used appropriately. The information will be presented for the most part in a structured format. There may be occasional errors in spelling, punctuation and grammar.</p> <p>Low Level Response 0-2</p> <p>The candidate may give limited or confused information about good food hygiene practices in the fresh food section of a supermarket. Answers may be in the form of a list with little or no description. There will be little or no use of specialist terms. Errors of spelling, punctuation and grammar may be intrusive.</p> <p>ONE mark for each correct answer. SIX required, e.g.</p>	[6]	[6]

	<p>Clean equipment / surfaces / premises. Well trained staff, following strict hygiene practice. Food is fresh / appropriately displayed Correct temperature for storage. Food protected from pests and human contamination/display counter / point of sale. Packaged fresh foods – undamaged. Within the “best before” or “sell by” dates. Rotation of fresh foods. Methods of preventing cross contamination enforced. Efficient response to clearing of spills or damaged goods etc</p>		
	Question 3 Total	[15]	

SPECIMEN

Question Number	Answer	Marks			
4(b)i	<p>Give <u>three</u> characteristics of a food product that appeals to young children.</p> <p>ONE MARK for each correct answer THREE required Max. 2 marks for each question, for one word answers.</p> <p>Attractive presentation. colourful Associated with familiar characters, personalities etc. Taste – must be qualified. Small pieces/portions Fun shapes Novelty/attractive packaging. Healthy/low in fat/sugar/salt Easy to eat</p>	[3x1]	[3]		
(bii))	<p>State <u>two</u> places, with different reasons, where a food product aimed at young children could be advertised.</p> <p>ONE MARK for each correct answer FOUR required</p> <table border="0"> <tr> <td> <u>Place</u> Supermarket/shops. Comic/magazines. TV Radio. Playgroups/schools/recreation. Cinema. Posters on boards/public Transport. </td> <td> <u>Reason</u> Children shop with parents Children/parents read them “pester power” Contact target group Become familiar with product and then want it. </td> </tr> </table>	<u>Place</u> Supermarket/shops. Comic/magazines. TV Radio. Playgroups/schools/recreation. Cinema. Posters on boards/public Transport.	<u>Reason</u> Children shop with parents Children/parents read them “pester power” Contact target group Become familiar with product and then want it.	[4x1]	[4]
<u>Place</u> Supermarket/shops. Comic/magazines. TV Radio. Playgroups/schools/recreation. Cinema. Posters on boards/public Transport.	<u>Reason</u> Children shop with parents Children/parents read them “pester power” Contact target group Become familiar with product and then want it.				
(a)	<p>Food labelling can benefit consumers when buying food. Explain how food labelling benefits consumers. High Level Response 7-8</p> <p>The candidate will give several points about food labelling and how it benefits the consumer. Specialist terms will be used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>Medium Level Response 4-6</p> <p>The candidate will give some points about food labelling and how it benefits the consumer but may lack specific detail of examples. There will be some use of specialist terms although these may not be used appropriately. The information will be presented for the most part in a structured format. There may be occasional errors in spelling, punctuation and grammar.</p>				

Question Number	Answer	Marks	
	<p>Low Level Response 0-3</p> <p>The candidate may give limited or confused information about food labelling and how it benefits the consumer. Answers may be in the form of a list with little or no description. There will be little or no use of specialist terms. Errors of spelling, punctuation and grammar may be intrusive.</p> <p>Subject specific material that may be covered by the candidate.</p> <ul style="list-style-type: none"> Information from the food manufacturer to the consumer. To use the food and food product correctly with storage and preparation information Nutritional information to help make informed choices on dietary needs and other aspects of product composition Name and address of manufacture in case of need to contact Label must state if the food has been through any processes Ingredients listed in descending order by weight, with permitted additives to help make informed choices Information related to environmental awareness, symbols, use of recycled materials etc. Information specific to vegetarians, gluten free etc Microwave /cooking instructions – details of how to cook the Product - consumer choice of method Freezing instructions/ suitability –consumer may need to freeze the product Bar code records sales and stock control Comparison of one product with another Manufacturing advertising and promotion Litterman symbol- encourage correct disposal 	[8]	[8]
	Question 4 Total	[15]	

Question Number	Answer	Marks	
5	<p>The company Tony works for insists on a yearly medical examination. At his recent examination the doctor advised changes to his diet and lifestyle.</p> <ul style="list-style-type: none"> • Describe the problems with Tony's current diet and lifestyle. • Explain the changes he needs to make. <p>Marks are allocated according to the quality of the response. Candidates should be able to show their depth of knowledge and understanding, using correct terminology.</p> <p>In order to achieve a high level response, both areas must be addressed in detail.</p> <p>A candidate only answering one part of the question well remains in the medium level response and can access up to 7 marks only. Must be answered well, with clear descriptions and/or explanations.</p> <p>If candidates respond by giving answers in a list, they remain in the lower level response.</p> <p>Bullet point answers can only achieve up to the medium level response only.</p> <p>A high level of response 10-15 The candidate will have read the data and can demonstrate an understanding of the current dietary recommendations for an adult male and explain the dietary changes needed. A whole range of specialist terms are used with precision. The candidate can demonstrate the accurate use of spelling, punctuation and grammar.</p> <p>A mid level of response 5-9 The candidate will have read the data and can demonstrate some understanding of the current dietary recommendations and explain why and how, the necessary dietary changes can be made. Basic information may be offered to support the answer but in general terms with little detail. The candidate can use a range of specialist terms with facility. There may be occasional errors in spelling, punctuation and grammar.</p> <p>A low level of response 0-4 The candidate makes comments about what is wrong with Tony's diet and gives one or two suggestions as to how he can improve it. Facts may not always relate to the contents. Basic information may be offered to support the answer but in general terms with little detail. The candidate can use a limited range of specialist terms. There will be errors in spelling, punctuation and grammar.</p>		

Question Number	Answer	Marks	
	<p>Subject specific material that may be covered by the candidate:</p> <p>Problems:</p> <p>Overweight. Risk of becoming obese with present diet and lifestyle. Lack of adequate exercise adding health risks. Diet not balanced in nutrients. Insufficient variety of foods. Considering his age, sex, occupation and lifestyle, the diet is too high in fat, sugar and salt, leading to associated health problems. Low in dietary fibre, fruit and vegetables. Mention of the fact that the data does not show if the food is fresh or processed. Too much snacking.</p> <p>Changes:</p> <p>Increase dietary fibre Reduces snacking/health benefits.</p> <p>Reduce intake of fat, sugar and salt. Associated health benefits</p> <p>Replace high sugar drinks with water, smoothies, milky drinks etc Reduce sugar Water/full feeling prevents dehydration increase Vit C and calcium</p> <p>Avoid snacks high in fat, sugar and salt Named Health benefits reduced health risks</p> <p>Ensure balanced meals, especially breakfast, Balanced diet/nutrients/reduce snacking</p> <p>Increase the use of fruit and vegetables. Contribution to a balanced diet/as a snack</p> <p>Limit take-aways Usually high in fat. Difficult to know nutritive value.</p> <p>Increase level of fitness/ cycle to work Reduce risk of CHD. Improve lifestyle. Etc.</p>		
	Question 5 Total	[15]	

Assessment Objectives Grid

Question	AO1 marks	AO2 marks	AO3 marks	Total
1	14	5	1	20
2	11	4	0	15
3	7	7	1	15
4	10	5	0	15
5	6	7	2	15
	48	28	4	80

SPECIMEN