

Write your name here

Surname

Other names

Centre Number

Candidate Number

Edexcel GCSE

Design and Technology:

Food Technology

Unit 2: Knowledge and Understanding of Food Technology

Wednesday 16 May 2012 – Afternoon

Time: 1 hour 30 minutes

Paper Reference

5FT02/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches it must be dark (HB or B). Coloured pens, pencils and highlighter pens must **not** be used.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

P39423A

©2012 Pearson Education Ltd.

6/6/6/6/c6/c4/c4



PEARSON

Answer ALL the questions.

For each question 1 to 10, choose an answer A, B, C or D. Put a cross in the box indicating the answer you have chosen . If you change your mind about an answer, put a line through the box and then mark your new answer with a cross .

1 Which **one** of the following conditions affects the growth of micro-organisms?

- A** Time
- B** Temperature
- C** Moisture
- D** All the above

(Total for Question 1 = 1 mark)

2 A method of low temperature preservation is:

- A** sterilisation
- B** pasteurisation
- C** freezing
- D** vacuum packaging

(Total for Question 2 = 1 mark)

3 There are three forms of carbohydrate in our diet. What are they?

- A** Vitamins, minerals and water
- B** Sugars, starch and fibre (NSP non starch polysaccharide)
- C** Protein, fats and fibre (NSP non starch polysaccharide)
- D** Sugars, starch and vitamins

(Total for Question 3 = 1 mark)

4 Too much sugar in our diet can lead to:

- A** obesity, tooth decay and diabetes
- B** obesity and anaemia
- C** tooth decay and beri beri
- D** diabetes, scurvy and tooth decay

(Total for Question 4 = 1 mark)



5 What is cholesterol?

- A Protein
- B Vitamin
- C Natural fat
- D Salt

(Total for Question 5 = 1 mark)

6 Which piece of electrical equipment uses computer aided manufacture (CAM)?

- A Breadmaker
- B Blender
- C Whisk
- D Liquidiser

(Total for Question 6 = 1 mark)

7 Which of the following ingredients are used in food products to bind a mixture together?

- A Eggs and milk
- B Flour and meat
- C Gravy and potatoes
- D Yogurt and jam

(Total for Question 7 = 1 mark)

8 Air can be introduced into a mixture to make a product rise by:

- A pulping
- B slicing
- C folding
- D baking

(Total for Question 8 = 1 mark)



9 Computer aided design (CAD) can be used for:

- A food processing techniques
- B food production processes
- C preservation treatment
- D recipe development

(Total for Question 9 = 1 mark)

10 What are Dietary Reference Values (DRVs)?

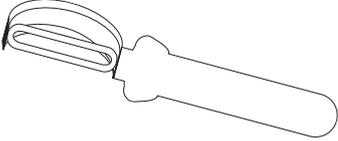
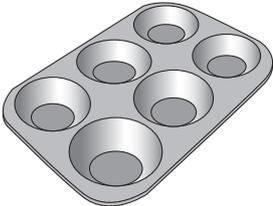
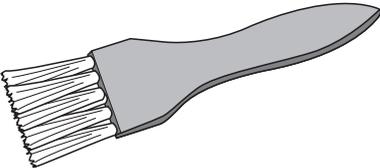
- A The study of food
- B The nutritional requirements for different groups of people
- C Nutritional analysis of food
- D Healthy eating guidelines

(Total for Question 10 = 1 mark)



11 (a) The table below shows some tools and equipment.

Complete the table below by giving the missing names and uses.

Tool/Equipment	Name	Use
	Peeler	(1)
	Palette knife	(1)
	(1)	To bake small cakes/ Yorkshire pudding/muffins/ pastry/tarts/pies
	(1)	To grease baking tins, glaze/ brush pastry with egg/milk/ sugared water

(b) Eggs are rich in protein.

(i) Name **two** other nutrients found in eggs.

(2)

1

2

(ii) Give **two** ways eggs should be handled or stored correctly to avoid contamination.

(2)

1

2



(iii) Give **three** functional uses of eggs in food preparation.

(3)

- 1
- 2
- 3

(iv) Describe what happens when eggs are heated.

(2)

.....

.....

.....

.....

(c) A quiche consists of a savoury egg custard filling in a pastry case.

Explain why a pastry case is 'baked blind'.

(2)

.....

.....

.....

.....

.....

.....



(d) The following recipe was used to produce a prototype quiche:

- 200 g plain flour
- 50 g butter
- 50 g lard
- 100 ml cold water
- 3 eggs
- 1 onion
- 50 g cheddar cheese
- 125 ml milk

Describe **two** modifications that would make the quiche suitable for someone following a weight loss diet.

(4)

1

.....

.....

.....

2

.....

.....

.....

(Total for Question 11 = 19 marks)



12 A manufacturer is developing a new range of soups.

The specification for the soup products is that they must:

- include one root vegetable
- include one bulb vegetable
- include one different seasonal summer vegetable
- include one good source of protein
- include one herb
- be one portion
- be sold in a container that has environmentally friendly packaging
- be able to be reheated easily.

In the spaces opposite, use sketches and, where appropriate, brief notes to show **two different** design ideas for the soup products that meet the specification points above.

Candidates are reminded that if a pencil is used for diagrams/sketches it must be dark (HB or B).

Coloured pens, pencils and highlighter pens must **not** be used.

Write your answers in the boxes provided opposite.

PLEASE DO NOT WRITE OR DRAW IN THIS SPACE.

PLEASE USE THE SPACES OPPOSITE FOR YOUR DESIGNS.



Design idea 1

(8)

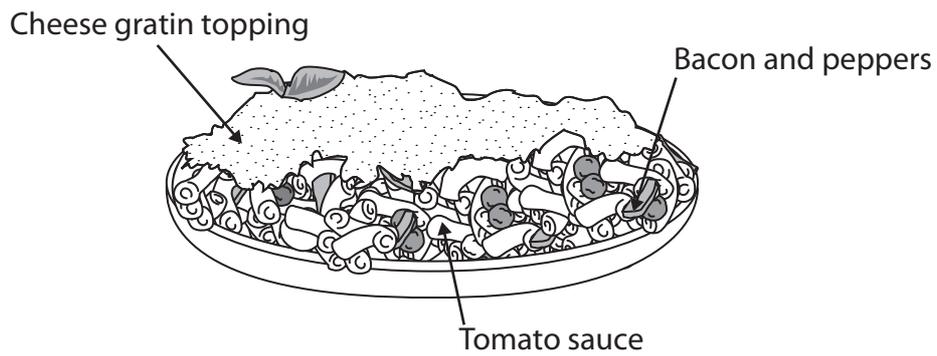
Design idea 2

(8)

(Total for Question 12 = 16 marks)



13 The drawing below shows an individual pasta bake product, sold in the chilled section of a supermarket.



(a) List **three industrial** food preparation techniques used to make the pasta bake product. (3)

Food preparation technique 1

Food preparation technique 2

Food preparation technique 3

(b) Describe **one industrial** processing method used to create the pasta bake. (2)

(c) Pasta bake products are often sold as a cook-chill product.

Describe **one** way in which the cook-chill process makes the pasta bake safe to eat. (2)



(d) Designers need to consider the sustainability of a commercial product.

Give **two** ways a manufacturer could ensure that the pasta bake product is sustainable.

(2)

1

2

(e) Explain why the pasta bake product is successful at meeting the following specification points:

(i) can be eaten as a main meal

(2)

.....
.....
.....

(ii) appeals to a wide range of age groups.

(2)

.....
.....
.....



*(f) A food manufacturer produces a range of pasta products.

Below are two recipes for a pasta bake.

Recipe A (ingredients only)	Recipe B (ingredients only)
<p>Pasta</p> <p>200 g cooked pasta</p> <p>Sauce</p> <p>150 ml liquid milk 25 g white flour 25 g butter 50 g cheddar cheese seasoning (salt and pepper)</p> <p>Additional ingredients</p> <p>50 g peas 50 g ham seasoning (salt and pepper)</p>	<p>Pasta</p> <p>200 g cooked pasta</p> <p>Sauce</p> <p>100 ml water 30 g dried skimmed milk powder 25 g cheddar cheese 50 ml whipping cream 25 g white flour 25 ml vegetable oil mustard powder colours salt</p> <p>Additional ingredients</p> <p>25 g peas 25 g ham starch salt spices garlic puree</p>



Evaluate recipe A compared with recipe B for use by a food manufacturer.

(6)

Area with horizontal dotted lines for writing the answer.

(Total for Question 13 = 19 marks)



P 3 9 4 2 3 A 0 1 3 1 6

14 Control systems are used to make sure a product is safe, legal and consistent.

(a) Name **one** control system used within the food industry to maximise product safety. (1)

.....

.....

(b) Explain the meaning of the term 'high risk food'. (2)

.....

.....

.....

(c) Describe why the incidence of food poisoning has increased. (2)

.....

.....

.....

(d) Consumers are protected by the Food Safety Act 1990.
Give **one** offence listed in the Food Safety Act 1990. (1)

.....

.....

(e) Food manufacturers try to produce high quality products.
Give **two** ways by which the quality of a food product might be judged by a consumer. (2)

1

.....

2

.....



(Total for Question 14 = 16 marks)

TOTAL FOR PAPER = 80 MARKS

