

Write your name here

Surname

Other names

**Pearson**  
**Edexcel GCSE**

Centre Number

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Candidate Number

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**Design and Technology:**  
**Food Technology**  
**Unit 2: Knowledge and Understanding**  
**of Food Technology**

Monday 1 June 2015 – 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). Colour 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.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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**PEARSON**

**Answer ALL questions.**

**Some questions must be answered with a cross in a box ☒. 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 ingredient is **not** used as a source of oil?

- A** seeds
- B** fish
- C** nuts
- D** milk

**(Total for Question 1 = 1 mark)**

**2** 'High risk' foods are:

- A** highly perishable foods
- B** nutritious protein foods
- C** foods with a high moisture content
- D** all the above

**(Total for Question 2 = 1 mark)**

**3** An intolerance to gluten is called:

- A** diabetes
- B** coeliac disease
- C** kwashiorkor
- D** anaemia

**(Total for Question 3 = 1 mark)**

**4** Gluten is found in:

- A** meat
- B** wheat
- C** eggs
- D** oil

**(Total for Question 4 = 1 mark)**



5 The term 'energy balance' means:

- A energy intake exceeds energy expenditure
- B energy expenditure exceeds energy intake
- C energy intake equals energy expenditure
- D the energy used each day

(Total for Question 5 = 1 mark)

6 The setting of protein is called:

- A coagulation
- B caramelisation
- C gelatinisation
- D dextrinisation

(Total for Question 6 = 1 mark)

7 The industrial freezing temperature range for food is:

- A  $-18^{\circ}\text{C}$  to  $-29^{\circ}\text{C}$
- B  $5^{\circ}\text{C}$  to  $-63^{\circ}\text{C}$
- C  $0^{\circ}\text{C}$  to  $-72^{\circ}\text{C}$
- D  $-1^{\circ}\text{C}$  to  $100^{\circ}\text{C}$

(Total for Question 7 = 1 mark)

8 The  $\text{e}$  symbol on a food label is used to show:

- A date mark logo
- B average weight
- C temperature control
- D litter logo

(Total for Question 8 = 1 mark)



9 The term 'root vegetable' is used to describe:

- A nuts, beans and pulses
- B swede, parsnip and turnip
- C liver, kidney and heart
- D kiwi fruit, lychee and mango

(Total for Question 9 = 1 mark)

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10 The units that make up proteins are called:

- A amino acids
- B starch
- C glucose
- D glycerol

(Total for Question 10 = 1 mark)

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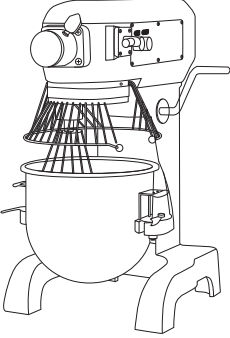
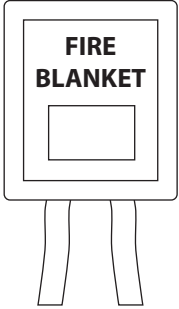
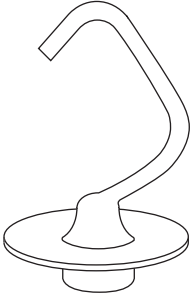
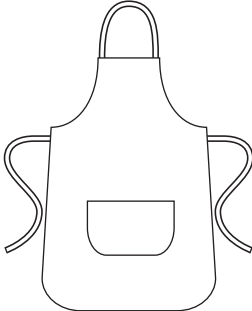


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11 (a) The table below shows some equipment and components.

Complete the table by giving the missing names and uses.

Equipment/Component	Name	Use
	(1)	Mix and combine ingredients
	Fire blanket	(1)
	(1)	Mix and combine ingredients for bread making
	Apron	(1)



(b) State **two** methods of preserving fish.

(2)

1 .....

2 .....

(c) Fish can be classified into different groups. Name **one** fish for each group.

(4)

White fish	
Oily fish	
Shellfish	
Crustaceans	

(d) Describe how a consumer can ensure they are buying sustainable primary food products.

(2)

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(e) Explain the importance of storing and handling 'high risk' foods correctly.

(2)

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.....  
.....



(f) The following recipe was used to produce a prototype fish pie:

200g fresh fish

75g spinach

1 hard boiled egg

150ml milk

25g butter

25g plain flour

200g mashed and creamed potatoes

Describe **two** modifications that would make the fish pie suitable for someone on a lactose free diet.

(4)

1 .....

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2 .....

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**(Total for Question 11 = 18 marks)**





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**12** An industrial bakery is developing a new range of snack pastry products suitable for picnics.

The specification for the snack pastry products is that they must:

- include one named pastry technique
- include a finishing technique
- be high in protein
- be suitable for batch production
- be high in fibre
- be easy to transport for a picnic
- be value for money
- use ICT in the food production process

In the spaces opposite, use sketches and, where appropriate, brief notes to show **two different** design ideas for the snack pastry 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.

**PLEASE DO NOT WRITE OR DRAW IN THIS SPACE.  
PLEASE USE THE SPACES OPPOSITE FOR YOUR DESIGNS.**



**Design idea 1**

**(8)**

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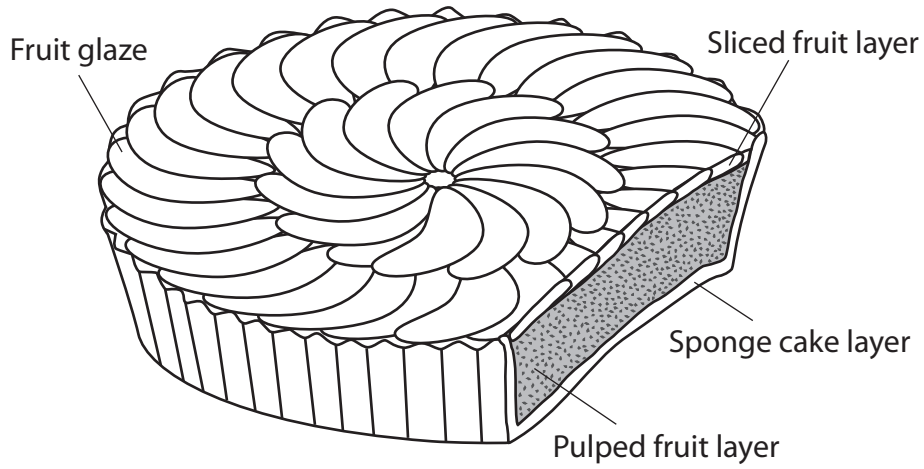
**Design idea 2**

**(8)**

**(Total for Question 12 = 16 marks)**



13 The drawing below shows a sponge fruit flan, sold in the chilled section of a supermarket.



(a) Name **one** raising agent used in the sponge cake layer. (1)

(b) State **one** cake making technique used to make the sponge cake layer. (1)

(c) A fruit glaze has been applied to the surface of the sliced fruit layer.  
Describe **one** reason why glaze is applied to the surface of the sliced fruit layer. (2)



(d) Explain **one** reason why standard components might be used in the production of the sponge fruit flan.

(2)

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(e) The manufacturer forms the sponge components of the fruit flan into a repeated shape using flan tins.

Give **two other** ways foods can be formed into repeated shapes.

(2)

1 .....

2 .....

(f) Explain why the sponge fruit flan is successful at meeting the following specification points.

(i) Environmentally friendly

(2)

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(ii) Good quality

(2)

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\*(g) A range of different ingredients is used to make the sponge fruit flan.

<b>Recipe A Ingredients</b>	<b>Recipe B Ingredients</b>
Flour	Wheat flour
Caster sugar	Sugar
Whole eggs	Whole eggs
	Stabiliser: humectant
	Glycerol
	Whey powder
	Dried egg white
	Salt
	Raising agents
	Flavouring
	Preservative: potassium sorbate

Evaluate the use of natural and artificial ingredients in the sponge fruit flan recipes for the manufacturer.

(6)

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(Total for Question 13 = 18 marks)



14 (a) Vitamins and minerals are micro-nutrients.

Give the missing answer for each of the vitamins and minerals listed below.

Nutrient	Source	Function	Effect of nutrient deficiency
Fluoride	(i) .....  (1)	Strengthens teeth against tooth decay	Gum disease Tooth decay
Iron	(ii) .....  (1)	To form haemoglobin and help transport oxygen around the body	.....  (1)
Vitamin A	Red meat, oily fish, apricots	(iii) ..... ..... ..... .....  (1)	..... ..... .....  (1)
Sodium	(iv) .....  (1)	Maintains water balance in the body	..... .....  (1)

(b) Modern technology can be used to create new food products.

Give **two** reasons why safety standards are needed for genetically modified foods.

(2)

1 .....

2 .....





(c) Explain the value of fortifying certain foods with additional micro-nutrients.

(2)

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(d) Give a definition for the term 'nutraceuticals'.

(1)

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