

GCSE

Specimen Papers and Mark Schemes

**Edexcel GCSE
Design & Technology: Food Technology
Full course (1970)**

**For First Examination
Summer 2003**

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Answer ALL questions in the spaces provided.

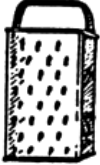
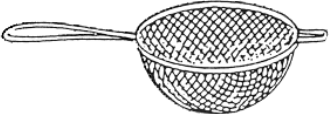
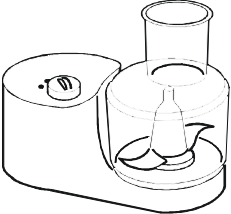
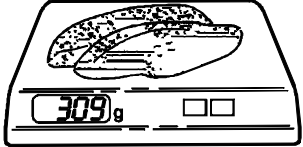
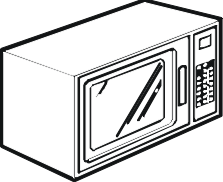
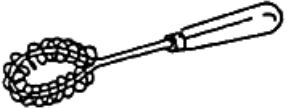
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1. The table below shows either some food tools or components or equipment.

(a) Complete the table by:

- (i) naming each tool or component or equipment;
- (ii) describing its use.

The first one has been done for you.

TOOL/COMPONENT/ EQUIPMENT	NAME	USE
	Box grater	Grate food into small pieces
		
		
		
		
		

(10)

(b) The grater in the table has four different sides so that it can be used with a variety of foods.

(i) Name **two** different foods the grater could be used for.

1

2

(2)

(ii) Name **one** safety rule to use when cleaning the grater.

.....

(1)

(c) Electric food processors have several grater attachments.

Name **three** different food processor attachments used in the preparation of the ingredients for a salad.

1

2

3

(3)

(d) Many manufacturers buy in ready grated foods as a standard component part.

(i) Explain what is meant by a *standard component part*.

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

(2)

(ii) Describe **two** advantages to a food manufacturer of using standard component parts.

1

.....

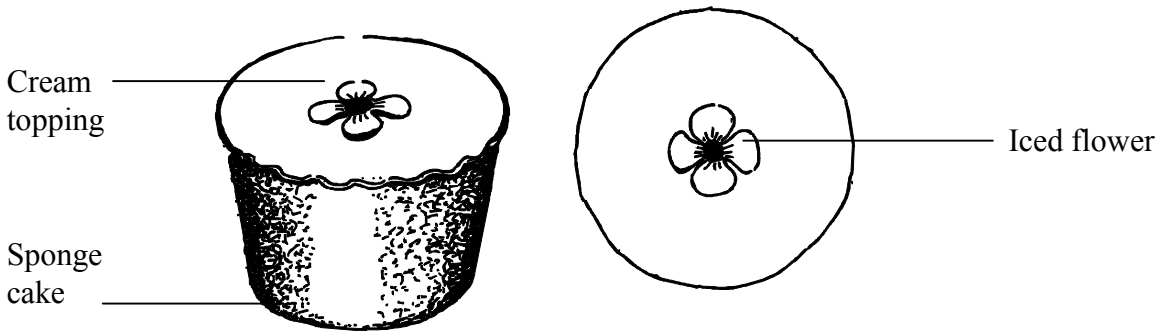
2

.....

(4)

(Total 22 marks)

2. A small bakery has launched a range of cream cakes similar to the one shown in the diagram below.



(a) The iced flower is an important part of the finished cake.

(i) Give **two** reasons for using the iced flower.

1

2

(2)

(ii) The iced flower is made from icing sugar and egg white.

Explain **one** health problem of using egg white.

.....

.....

(2)

(b) The top of the cake could be coated using different ingredients.

(i) Name **three** other ways of coating the top of the cake.

1

2

3

(3)

Leave blank

(ii) Choose **two** coatings from your answer in (b)(i) and explain why they are suitable.

Coating 1

Explanation.....

.....

Coating 2

Explanation.....

.....

(4)

(c) Consumers are often tempted by advertisements to buy cream cakes.

(i) Describe **two** ways in which cream cakes may contribute to poor health.

1

.....

2

.....

(4)

(ii) Describe **two** improvements which could be made to the cake to make it more healthy.

1

.....

2

.....

(4)

(iii) Name **three** disadvantages of doing this.

1

2

3

(3)

(Total 22 marks)

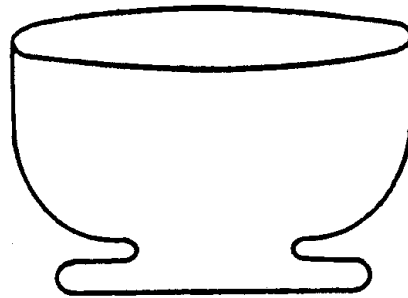
3. A company is preparing to launch a new pasta salad for school canteens. Labels are required for the foil lid and plastic container of the packaging.

The specification for the labels is that they must:

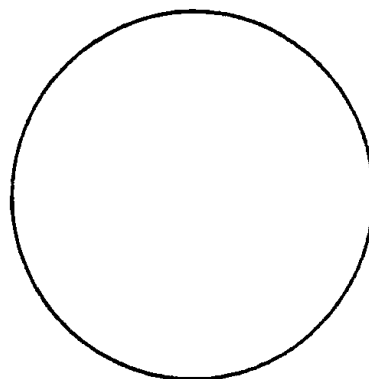
- target secondary school students;
- be colourful and attractive;
- have an Italian theme;
- contain the information required by law.

- (a) In the spaces below, use notes and sketches to show **two** ideas for the design of the pasta salad labels which meet the specification.

DESIGN IDEA 1



Plastic container

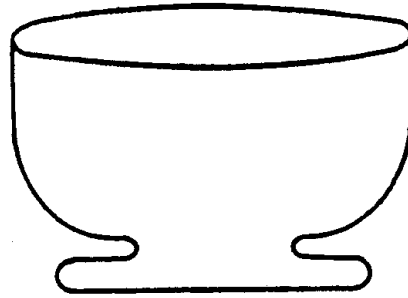


Foil lid

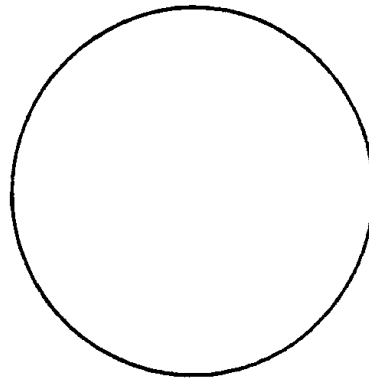
(8)

DESIGN IDEA 2

*Leave
blank*



Plastic container



Foil lid

(8)

(b) Three of the specification points are given again below.
Use these headings to evaluate **one** of your designs against the initial specification.

*Leave
blank*

Be colourful and attractive.

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

Have an Italian theme.

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

Contain the information required by law.

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

(6)

(Total 22 marks)

4. The diagram below shows the packaging from a packet of frozen beef burgers.



ADDITIONAL INFORMATION

Beef burgers appeal to both adults and children.
 Beef burgers provide protein and energy.
 They can be eaten as a snack or as part of main meal.

(a) Two specification points for the beefburgers are:

- they must be well shaped;
- they must be quick to cook.

Give **three** more points of specification which could be included in the specification for these beefburgers. For each point, give a reason why it should be included.

1

Reason

2

Reason

3

Reason

(6)

(b) Name **three** ingredients which are used to make beef burgers.

1

2

3

(3)

- (c) Give **one** property for **one** of the ingredients you have named in (b) and explain how this property makes it suitable for this product.

Property

Explanation.....

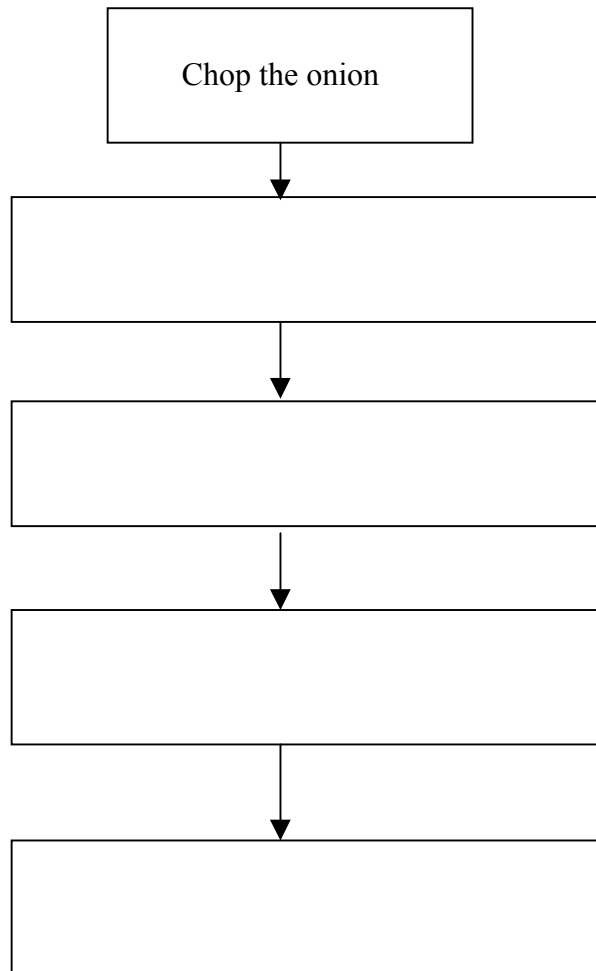
.....

.....

(4)

- (d) The frozen beef burgers are mass produced using large scale mass production methods. Complete the diagram below to show the main stages in the production process.

The first stage has been done for you.



(5)

- (e) Frozen beef burgers can be used as a quick cook part of a snack or meal.
Describe how the production process helps achieve this.

*Leave
blank*

.....

.....

.....

.....

(4)

(Total 22 marks)

PAPER TOTAL 88 MARKS

END

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Answer ALL questions in the spaces provided.

Leave
blank

1. The diagram below shows the packaging from a packet of frozen beef burgers.



ADDITIONAL INFORMATION

Beef burgers appeal to both adults and children.

Beef burgers provide protein and energy.

They can be eaten as a snack or as part of main meal.

- (a) Two specification points for the beefburgers are:

- they must be well shaped;
- they must be quick to cook.

Give **three** more points of specification which could be included in the specification for these beefburgers. For each point, give a reason why it should be included.

1

Reason

2

Reason

3

Reason

(6)

(b) Name **three** ingredients which are used to make beef burgers.

1

2

3

(3)

(c) Give **one** property for **one** of the ingredients you have named in (b) and explain how this property makes it suitable for this product.

Property

Explanation.....

.....

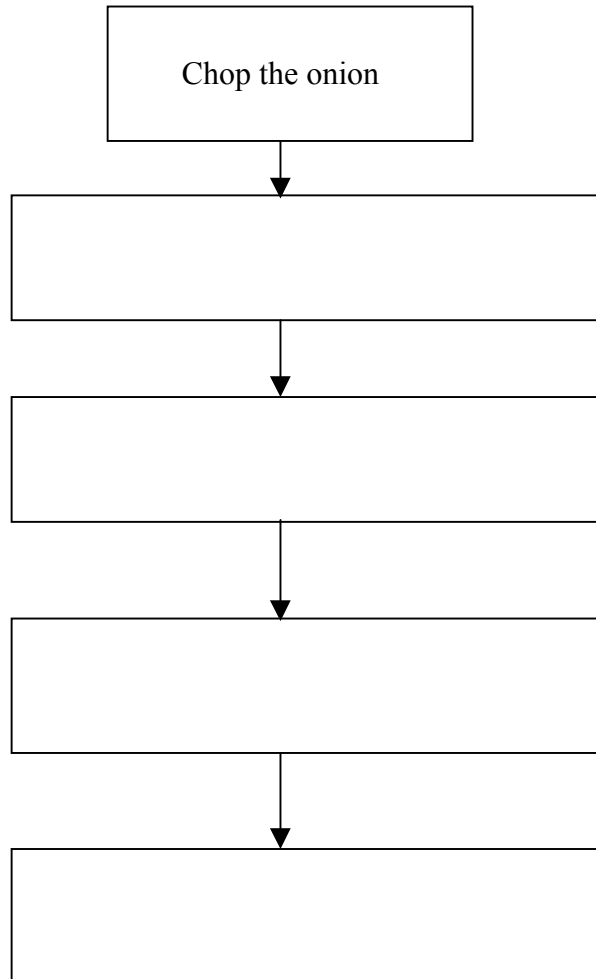
.....

(4)

- (d) The frozen beef burgers are mass produced using large scale mass production methods. Complete the diagram below to show the main stages in the production process.

Leave blank

The first stage has been done for you.



(5)

- (e) Frozen beef burgers can be used as a quick cook part of a snack or meal. Describe how the production process helps achieve this.

.....

.....

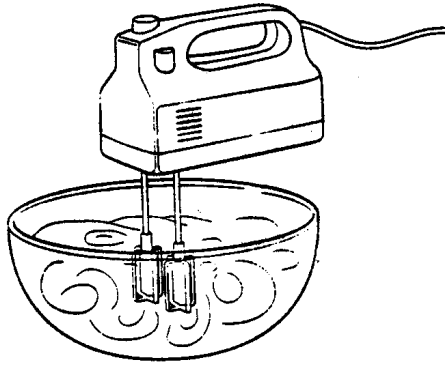
.....

.....

(4)

(Total 22 marks)

2. The picture below shows a hand held electric food mixer.

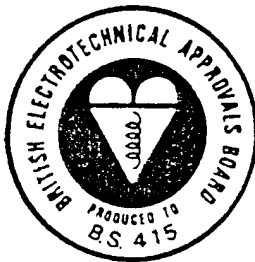


(a) (i) Give **three** reasons why these food mixers are so popular.

- 1
- 2
- 3

(3)

(ii) A new electric food mixer had the following label on it.



Name this label and explain what this label means.

Name.....

Explanation.....

.....

(3)

(b) Egg whites can be whisked to a foam using a food mixer.

(i) Name **three** different food products that use whisked egg whites in the mixture.

1

2

3

(3)

(ii) Explain what happens to the foam when egg yolks are added to the mixing bowl.

.....

.....

(2)

(c) Evaluate the usefulness of a hand held electric food mixer to a small catering company for small batch production.

.....

.....

.....

.....

.....

.....

(6)

(d) In mass production processes using a mixer, a swab may be taken.

(i) State from where on the mixer the swab would be taken.

.....
(1)

(ii) Describe the test carried out on the sample taken by the swab.

.....
.....
(2)

(iii) Explain the reason for carrying out the test.

.....
.....
(2)

(Total 22 marks)

3. Shelf life is an important consideration for manufacturers of high volume products.

(a) Give **three** reasons why shelf life is such an important consideration.

- 1
- 2
- 3

(3)

(b) Food components must be stored correctly to keep them fresh and safe to eat.

(i) Describe the correct storage conditions for:

- 1. A chocolate mousse.....
.....
- 2. A packet cake mix
.....

(4)

(ii) Packet cake mixes have a long shelf life.

Explain **two** ways in which this is achieved.

- 1
-
- 2
-

(4)

(c) Some foods can be irradiated to extend shelf life.

(i) Explain the process of irradiation.

.....
.....
(2)

(ii) Give **three** food products which could be irradiated to extend their shelf life.

1
2
3
(3)

(iii) Irradiation raises moral concerns for some customers.

Explain **three** reasons for this.

1
.....
2
.....
3
.....
(6)

(Total 22 marks)

4. A manufacturer is designing a new pastry product suitable for packed lunches.

The specification for the pastry product is that it must:

- be easy to hold in the hand;
- provide a filling snack;
- contain a balance of nutrients;
- be suitable for a large batch production.

- (a) In the spaces below use notes and sketches to show details of **two** designs of your pastry product which meets the specification.

DESIGN IDEA 1

DESIGN IDEA 2

*Leave
blank*

(8)

DESIGN & TECHNOLOGY: FOOD TECHNOLOGY (1970/2F)
FULL COURSE FOUNDATION TIER MARK SCHEME

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
1.	(a)	(i)	Name: Sieve Name: Food processor Name: Electric scales Name: Microwave oven Name: Whisk	5x1	
		(ii)	Use: draining juice/removing lumps/sieving flour Use: Mixing, chopping etc Use: weighing ingredients Use: Defrosting, cooking, heating etc. Use: Whisking cream/eggs/egg white sauce	5x1	(10)
	(b)	(i)	One mark for each food. Must Show use of different size grater. Cheese/vegetables/fruit rinds	2x1	(2)
		(ii)	Grating fingers/when washing up remove food	1	(1)
	(c)		Answers should show three different size grater attachments Fine grater – carrots/onions Coarse grater – cabbage/root vegetables Slicer – cucumber	3x1	(3)
	(d)	(i)	A response that highlights the following A pre-prepared item that can be used with other ingredients to make a complete dish	2x1	(2)
		(ii)	Savings in time, energy and fuel cost Consistency of quality within the batch Quality of finished product	2x2	(4)
					(22)
2	(a)	(i)	Colour, attract the customer, decoration	2x1	(2)
		(ii)	Explanation which makes reference to: Salmonella bacteria present in most eggs, Can cause food poisoning	2x1	(2)
	(b)	(i)	Confectioner's cream/buttercream/fondant icing/galce/water icing/chocolate	3x1	(3)
		(ii)	Explanation which makes reference to: No marks for the choice suitability e.g. sweetness; flavour; keeping quality	2x2	(4)

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
	(c)	(i)	High in fat, leading to formation of cholesterol, and danger of heart attack High in sugar, leading to obesity and dental decay Low in fibre, leading to constipation/ bowel cancer	2x2	(4)
		(ii)	Reduce fat content or change to vegetable oils Use a proportion of artificial sweetener Add fibre in the form of dried fruit or carrot	2x2	(4)
		(iii)	Reduce appeal to customer/alter taste/ alter texture	3x1	(3)
					(22)
3	(a)		DESIGN IDEA 1 Each point of specification resolved in design (fully = 2, partly = 1)	4x2	(8)
			DESIGN IDEA 2 Each point of specification resolved in design (fully = 2, partly = 1)	4x2	(8)
	(b)		Each specification point evaluated (fully = 2, partly = 1)	3x2	(6)
					(22)
4	(a)		Accept any three relevant points of specification and reasons eg. Point: High meat content Reason: Maximise protein content Point: Not too much seasoning/flavouring Reason: For health reasons Point: Cook using a variety of different methods Reason: Versatility	6x1	(6)
	(b)		Beef, onion, cereal, binding agent (egg), salt	3x1	(3)
	(c)		One mark for name, three for explanation Meat – coagulates on cooking to set the burger/provides protein for the meal. Cereal – helps bind the burger/ adds bulk to make it filling Egg - binds the ingredients to prevent them falling apart Salt - seasoning and preservative to add/increase flavour Shelf life	1+3	(4)
	(d)		No marks for cooking the burger it is a frozen product Mix raw ingredients Bind with egg Shape/stamp Freeze Correct sequence	4x1 1	(5)

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
	(e)		Evaluation points should include Quick cook Convenient because frozen Fry, grill or microwave to cook Protein provided for part of the meal	2x2	(4)
					(22)
			TOTAL FOR PAPER 88 MARKS		

**DESIGN & TECHNOLOGY: FOOD TECHNOLOGY (1970/2H)
FULL COURSE HIGHER TIER MARK SCHEME**

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total	
1	(a)		Accept any three relevant points of specification and reasons eg. Point: High meat content Reason: Maximise protein content Point: Not too much seasoning/flavouring Reason: For health reasons Point: Cook using a variety of different methods Reason: Versatility	6x1	(6)	
			(b)	Beef, onion, cereal, binding agent (egg), salt	3x1	(3)
			(c)	One mark for name, three for explanation Meat – coagulates on cooking to set the burger/provides protein for the meal. Cereal – helps bind the burger/ adds bulk to make it filling Egg - binds the ingredients to prevent them falling apart Salt - seasoning and preservative to add/increase flavour Shelf life	1+3	(4)
			(d)	No marks for cooking the burger it is a frozen product Mix raw ingredients Bind with egg Shape/stamp Freeze Correct sequence	4x1 1	(5)
			(e)	Evaluation points should include Quick cook Convenient because frozen Fry, grill or microwave to cook Protein provided for part of the meal	2x2	(4)
2	(a)	(i)	Reasons can include Speed up process, therefore time efficient Make a more professional job Consistency and finer finish Lightweight	3x1	(3)	
		(ii)	Electrical safety label/kite mark Ensures that equipment tested to/ meets BSI safety standards Assurance of quality	1 2x1	(3)	
	(b)	(i)	Meringues, mousses, soufflés, desserts and any other suitable choice	3x1	(3)	
		(ii)	Explanation needs to include the concept that the fat in egg yolk prevents protein web forming.	2x1	(2)	

Qu.	Prt Qu.	Sub Qu.	Detailed Possible Answers	Mark Alloc.	Sub. Total
	(c)		Positive – inexpensive, portable, versatile, time saving Negative – not very robust when in constant use, not for large quantity	3x2	(6)
	(d)	(i)	a sample taken from the surface	1	(1)
		(ii)	cultured to see if there is any bacterial contamination	2x1	(2)
		(iii)	Explanation for carrying out the process – food safety check, check that routine maintenance procedures work	2x1	(2)
					(22)
3	(a)		Any 3 reasons from: The factory may need to store ingredients/ goods until needed There is a time lapse between manufacture and sale to consumer. Reduce waste/ increase profit if goods keep well	3x1	(3)
	(b)	(i)	Description which makes reference to: Refrigerate 2- 5°C conditions Dry, cool conditions	2x2	(4)
		(ii)	Explanation which makes reference to: Dry product therefore bacteria cannot breed Use of preservatives as additives	2x2	(4)
	(c)	(i)	Explanation should detail: Food subjected to electron beams or gamma rays The energy molecules formed destroy bacteria	2x1	(2)
		(ii)	Any three irradiated foods	3x1	(3)
		(iii)	Explanation makes reference to: Toxins not destroyed Some nutritional loss Customers fear exposure to radiation	3x2	(6)
					(22)
4	(a)		DESIGN IDEA 1 Each point of specification resolved in design (fully = 2, partly = 1)	4x2	(8)
			DESIGN IDEA 2 Each point of specification resolved in design (fully = 2, partly = 1)	4x2	(8)
	(b)		Each specification point evaluated (fully = 2, partly = 1)	3x2	(6)
					(22)
			TOTAL FOR PAPER 88 MARKS		

**DESIGN & TECHNOLOGY: FOOD TECHNOLOGY (1970)
SPECIFICATION GRID**

PAPER 2F				
Quest	Assessment objective tested	Content covered by question	Question style/type	Marks
1	AO1	Preparing, processing and finishing materials and manufacturing commercial products	Structured question on a theme.	Total 22
2	AO1 + AO3	Classification and selection of materials and components. Design and market influence, parts (i) and (ii) not covered in question 3.	Structured question on a theme.	11 + 11 Total 22
3	AO2	Design question. This question accounts for all 10% of designing marks.	Design question – candidates design a product from a specification and evaluate against the specification.	Total 22
4	AO3	Design and market influence, part (iii).	Product analysis – candidates are asked to analyse a product following the analysis process.	Total 22
PAPER 2H				
Quest	Assessment objective tested	Content covered by question	Question style/type	Marks
1	AO3	Design and market influence, part (iii).	Product analysis – candidates are asked to analyse a product following the analysis process.	Total 22
2	AO1	Preparing, processing and finishing materials and manufacturing commercial products	Structured question on a theme.	Total 22
3	AO1 + AO3	Classification and selection of materials and components. Design and market influence, parts (i) and (ii) not covered in question 3.	Structured question on a theme.	11 + 11 Total 22
4	AO2	Design question. This question accounts for all 10% of designing marks.	Design question - candidates design a product from a specification and evaluate against the specification.	Total 22

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