



General Certificate of Secondary Education

Design and Technology (Food Technology) 3552

Short Course Foundation Tier

Mark Scheme

2007 examination - June series

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1 (a) What are the advantages of using the following types of bread?

(i) a sliced loaf

- Convenient
- Different thickness of slices
- Saves times
- Range of products
- Easy storage shape
- Easier for young and old to use / easy to use

Qualified answer or two simplistic answers (**2 marks**)

Simplistic answer (**1 mark**)

(2 marks)

(ii) a part baked loaf

- Longer shelf life
- Good for emergencies / convenient
- Less cooking time / less fuel used
- Can be served hot
- Cut to desired slice size

Qualified answer or two simplistic answers (**2 marks**)

Simplistic answer (**1 mark**)

(2 marks)

(b) (i) Using the information shown in the table, name two bread products that have become more popular.

Any two from: Bagel, Ciabatta, Croissant or Naan

(2 marks)

(ii) Explain why these have become popular.

- Changes in consumer preferences
- More foreign holidays
- Multi cultural society
- Consumers experiment more with food
- New technology better distribution, transport for raw materials

Qualified answers well explained or number of simplistic answers

(**4 marks**)

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(4 marks)

Total for question 10 marks

- 2 (a) (i) Using information from the table, name the type of flour which is most suitable for a healthy option bread product.

Wholemeal

(1 mark)

- (ii) Give reasons for your choice.

- Lowest in kcal
- High fibre – good for digestion, removal of waste products
- High in iron – healthy blood

Qualified answers well explained or number of simplistic answers
(4 marks)

Qualified answer or two simplistic answers (2 – 3 marks)

Simplistic answer (1 mark)

(4 marks)

- (b) (i) Name the type of flour from the table that is most suitable for making a *well risen* loaf of bread

Strong white flour

(1 mark)

- (ii) Give reasons for your choice.

- Contains protein 'gluten'
- To improve elasticity
- To assist rising / light open texture

Qualified answer or two simplistic answers (2 marks)

Simplistic answer (1 mark)

(2 marks)

Total for question

8 marks

3 (a) Use notes and sketches to show two different design ideas for a Wrap or Roll product.

Each sketch should reflect the design criteria.

- Ideas produced must be different products; not variations of the same product.
- Ideas should be communicated through the use of notes and sketches, including 2D, 3D or cross sections.
- Ideas should be suitable for providing a healthy option
- Should include a filled bread product.
- Suitable for eating without cutlery.
- Notes may show the main features of the product e.g. dimensions, shape, texture, colour, finishing techniques, cooking / preparation methods, portion control.
- May mention the target group product is aimed at.
- Accept different types of wrap / roll bread products.

For each sketch;

Recognisable sketch / prose showing good communication of main features of a relevant product (**4 – 5 marks**)

Sketch / prose shows basic ideas for relevant product but not clearly communicated (**2 – 2 marks**)

Sketch or prose attempted but inappropriate choice of product (**1 mark**)

2 x 5 marks (10 marks)

(b) (i) Explain how this design idea will ‘appeal to a range of consumers’.

May refer to;

- Age groups e.g. children, adults, teenagers
- Different cultures
- Special dietary needs e.g. coeliac, nut free
- Sensory appeal e.g. through colour, texture, flavour, aroma
- Environmentally friendly – use of organic ingredients

Qualified answers well explained or number of simplistic answers (**4 marks**)

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(4 marks)

(ii) Explain how this design idea offers a ‘healthy option’.

May refer to;

- Low fat content – cholesterol levels
- Additive free
- High fibre content
- Lower salt
- Applies 5 a day rule
- Good balance of nutrients
- High / low kcal and meeting energy needs
- Suitability for vegetarians or other special dietary needs
- Dietary needs of specified target groups

Qualified answers well explained or number of simplistic answers

(4 marks)

Qualified answer or two simplistic answers **(2 – 3 marks)**

Simplistic answer **(1 mark)**

(4 marks)

(c) Write a step-by-step plan for making your chosen design idea in a test kitchen.

Candidate should show an awareness of different aspects of planning that make up a production system, e.g. at least one reference to the following may be included:

- Logical sequence
- Raw ingredients
- Specialist terminology timings temperatures
- Named processes for both bread and filling or standard component and filling
- Personal hygiene
- Kitchen hygiene
- Food safety
- Control checks
- Feedback
- Clarity of instructions
- Final product
- Finishing techniques

Answer showing logical plans, clarity of instruction and detail

(9 – 10 marks)

Logical planning with a range of different information covered

(6 – 8 marks)

Some parts detailed, may not be logical, some key areas for successful production omitted **(4 – 5 marks)**

simplistic answer giving some relevant planning **(1 – 3 marks)**

(10 marks)

- (d) **Name three other food items that could be included with your Wrap or Roll product in a healthy option lunch box. Give a reason for each choice.**

Items may include any of the following;

- Fruit products, e.g. apple, oranges
- Snack foods, e.g. salad items cucumber batons, celery sticks...
- Crisps...healthy option variety
- Mini finger snack, e.g. chicken pieces
- Drinks, e.g. fresh fruit juices
- No yoghurts as cutlery needed!
- Any other relevant answer

Reasons for choice must link with food item chosen:

- Nutrient value
- Dietary need met
- Low fat, sugar, salt options
- High fibre options
- Additive free options
- Balance between sweet and savoury
- Calorific value
- Convenience

2 x 3 marks (6 marks)

Total for question 34 marks

- 4 (a) Describe two different control checks used when making chicken salad wraps, at each of the preparation stages listed below.**

Preparation Stage	Control checks used.
Choosing raw ingredients	Any checks related to : Reliable supplier, datemarks, condition of packaging, storage conditions / temperatures, portion controls
Cooking the chicken	Any checks relating to: Temperature controls, timings, thoroughness of cooking, use of food probes, quality control of sizes of foods.
Storing the prepared filling	Any checks relating to: Temperatures, checking reliability of equipment, thermostats, packaging materials, datemarking

Qualified answer or two simplistic answers (**2 marks**)

Simplistic answer (**1 mark**)

3 x 2 marks (6 marks)

**(b) Results of control checks show the following problems.
Complete the table above to show**

(i) one cause of each problem,

(3 marks)

(ii) how each problem may be prevented.

(3 marks)

Problem	Cause	How to prevent this problem
Bread rolls do not rise when cooked	Not left to prove long enough	Checks on temperatures used
	Too hot oven	Checks on freshness of yeast used
	Stale yeast used	
	Incorrect conditions for breadmaking	
A tortilla wrap falls to pieces when filled	Wrap is stale.	Use correct proportions of ingredients
	Filling is too bulky or wet.	
	Incorrect handling when filled	Quality control checks for consistency, size and shapes of filling
	Wrap is too small	
An insect is found in a sandwich	Poor hygiene standards	Wash salad before use
	Salad not washed before use	Use insect exterminator
		Routine hygiene inspections
		Hygiene checks

2 x 3 marks

(6 marks)

Total for question

12 marks

5 (a) (i) What is meant by the term *standard component*?

- Ready made component
- May give examples

Qualified answer or two simplistic answers (**2 marks**)

Simplistic answer (**1 mark**)

(**2 marks**)

(ii) What are the advantages of using standard components?

- Saves time
- Saves energy
- Consistent product
- Good if staff do not have the skills needed
- Good if equipment needed to make product is not available
- Saves purchase / storing of raw ingredients
- Avoids cross contamination on the production line.
- Any other relevant answer

Qualified answers well explained or number of simplistic answers

(**4 marks**)

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(**4 marks**)

- (b) (i) Name one method of sensory testing on the following sample of sandwich fillings.**

Any named form of testing e.g. difference tests, ranking tests, rating tests, profiling. (Do not accept preference tests)

(1 mark)

- (ii) Using notes and / or sketches describe how this sensory test is carried out.**

Descriptions may be for any named form of testing e.g. difference tests, triangle tests, ranking tests, rating tests, profiling. Name of test should be given for full marks.

Description may include;

- Place where carried out
- Type of people to ask / target group / audience
- Number of people asked
- Fair testing considerations
- How results are recorded
- Analysis of results / data
- Conclusion drawn from results
- How results may benefit future product design

Qualified answers well explained or number of simplistic answers

(5 marks)

Qualified answer or two simplistic answers **(3 – 4 marks)**

Simplistic answers **(1 – 2 marks)**

(5 marks)

Total for question 12 marks

6 (a) What is meant by a *consistent product*?

- All products are the same
- Every time made
- May indicate similarities in size, shape, colour, portion size

Qualified answer or two simplistic answers (**2 marks**)

Simplistic answer (**1 mark**)

(**2 marks**)

(b) Explain how the following equipment is used to produce a consistent product when making filled sandwiches.

(i) a food processor with attachments

- Use of speed
- Cutting, grating, mixing attachments
- Accuracy of outcome
- Reduces human error
- Results can be replicated
- Overcomes operator tiredness or lack of skill
- May give examples of attachments and ingredients used for.

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(**3 marks**)

(ii) an electric breadmaker

- Reduces human error
- Results can be replicated
- Overcomes operator tiredness or lack of skill
- Same shape every time
- Pre set for a certain time

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(**3 marks**)

Total for question

8 marks

- 7 (a) The information below is often seen on packaged sandwich products. Why is the information important to consumers?**

(i) 'May contain wheat, milk, gluten'

- Given as a warning
- Danger foods for some consumers
- Allergy advice information
- Indicates where made use of these ingredients on the production line.

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(3 marks)

(ii) 'Keep refrigerated'

- High risk product
- Bacteria multiply
- When in warm temperatures / danger zone
- If taken out of refrigerator too early
- Risk of food poisoning if not followed
- Must be kept below room temperatures

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(3 marks)

- (b) Ready prepared sandwiches are stored in chiller cabinets. How do retailers (shopkeepers) make sure that the chiller cabinets do not fall below the correct temperature?**

- Regular checks
- Monitoring by staff
- Train staff in food hygiene
- Alarms if electricity supply cut or temperature lowered
- Check doors are closed
- Check fill levels
- Defrost regularly to meet standards and efficiency

Qualified answers well explained or number of simplistic answers
(**4 marks**)

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(4 marks)

(c) Give reasons why manufactures of takeaway products use the following packaging materials.

(i) paperboard

- Cheap
- Can be printed on
- Can be folded into shapes
- Light to carry
- Easy to store
- Recyclable

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(3 marks)

(ii) plastics

- Fairly cheap
- Mouldable
- Easy to store
- Light
- Recyclable
- May be transparent

Qualified answer or two simplistic answers (**2 – 3 marks**)

Simplistic answer (**1 mark**)

(3 marks)

Total for question 16 marks

Total for paper 100 marks

GCSE DESIGN AND TECHNOLOGY: FOOD TECHNOLOGY 2007
Question Paper Assessment Grid - Short Course Foundation Tier

Content / Skills	AO1 (25%)	AO2 (50%)	AO3 (25%)
Materials and components			
Composition etc. of food			
Working characteristics of food	2a) 1		2a) 4
Effect of temperature	4b) 2	4a) 2 4b) 2	
Effect of other factors	2b) 1	4a) 2	2b) 2
Design and Marketing Influences			
Food product development	1b) 2		1b) 4
Stages of development		3a) 10	3b) 4
Application of procedures	5b) 6	3c) 10	
Labelling etc.		5a) 6 7a) 3	7c) 6
Social and economic implications	1a) 4	3c) 3	3d) 3
Processes and Manufacture.			
Combining different ingredients		4b) 2	3b) 4
Importance of proportions	6a) 4		
Additives			
Use of equipment	6b) 4	7b) 4	
Micro organisms and enzymes		4a) 2	
Preservation methods		7a) 3	
Approximate marks per AO:	FC 31 marks; SC 25 marks	FC 63 marks; SC 50 marks	FC 31 marks; SC 25 marks.
	24	49	27