



GCSE BITESIZE Examinations

General Certificate of Secondary Education

Design and Technology

Food Technology Marking Scheme

Total marks: 115

1a)

Award one mark for each correct piece of information.

One mark for each correct explanation.

(8 marks)

Product Name – This should clearly tell the consumer what the product is.

List of Ingredients – This should be listed in descending order of weight.

Storage Conditions – This states specific instructions for the storing the product to prevent food spoilage.

Shelf Life – The manufacturer should include either the ‘use by’ date, ‘best before’ date or ‘display until’ date. The date is given as a guide to ensure products are eaten at best quality.

Cooking/Preparation Instructions – This explains how the product can be prepared including cooking temperatures and times.

Name and Address of Manufacturer – This states the contact details for the consumer if they wish to complain about the product.

Weight or volume – This ensures that consumers get the same amount of product for their money.

1b)

(2 marks)

e means that the contents is of an average weight but it may be a couple of grams either side of the weight given on the packaging.

1c)

Two marks for each correct explanation and two marks for a correct example of each.

(6 marks)

A use by date is used for high risk food product such as raw and cooked meats, seafood and dairy products. The food is safe to eat until this date but should be disposed of after the date shown.

A best before date is used for low risk foods such as jam, crackers, and sweets. It means that if you wish to eat the product at its best quality it should be eaten by the date. After the date, the product will begin to deteriorate the colour, taste, texture and flavour will begin to change.

2a)

Award one mark for each correct example.

One mark for each correct explanation.

(6 marks)

Primary Methods

Questionnaire – A set of questions are given to the consumers to gather information about their views on a product.

Interviews – Information is collected by asking consumers and specialists their views about a products.

Product disassembly – Existing products are sampled and information on their characteristics is collected.

Supermarket survey – General information, such as cost, weight and ingredients, is collected on a range of products to gain knowledge on the range of products already available.

Secondary Methods

Books – Recipe books, food technology books and magazines provide a variety of information on food.

Internet – This provides access to a variety of information on food and food products.

Mood/image boards – This consists of a collection of images on a theme.

2b)

Award one mark for correct/relevant example.

One mark for explanation.

(4 marks)

Internet – to carry out research.

Email – to contact consumers and companies to research about products.

Excel – to help produce graphs and tables to analyse the results of research.

3a)

Award one mark for each point.

(5 marks)

A design specification should include points such as – must be a dessert, must be luxurious, must appeal to people who enjoy entertaining, price, packaging, particular ingredients, and portion size.

3b)

Marks per sketch:

One mark for a clear sketch.

Two marks for labelling with ingredients.

Two marks for labelling with reasons why the design fits the brief. (10 marks)

3c)

Two marks for all ingredients should be identified (weights not necessary).

Six marks for explanation of the function of each ingredient should be specific. (8 marks)

These are the main ingredients that may be used:

Flour

- Forms the structures of the cake
- After the starch converts to sugar (dextrinisation) the sugar caramelises to add colour to baked products

Margarine

- When creamed together it holds air, which makes the product lighter
- Adds flavour
- Aids preservation

Sugar

- Gives texture
- Adds sweetness
- Adds colour
- Holds air during creaming process

Eggs

- Adds protein
- Traps air to give a good texture
- Helps to form the structure when it coagulates (sets)

Other ingredients such as chocolate and fruit will add texture, colour and flavour to the product.

(Please see the bitesize website or revision guides for other functions of ingredients.)

3d)

(10 marks)

Two marks for a sketch of appropriate packaging.

Four marks for labelling and explanation of the choice of packaging materials for the product.

Packaging

Card and Paper – Cheap to produce, easy to print labelling onto, biodegradable, recyclable, if it's corrugated it can help to protect and insulate the product.

Plastics – Lightweight, cheap to use, water resistant, can be flexible or rigid, protects food

Four marks for eight clear different pieces of information for the label.

- Product name
- List of ingredients
- Storage conditions
- Shelf life
- Cooking/preparation instructions
- Name and address of manufacturer
- Weight or volume
- Bar code
- Special features.

4a)

Food, moisture, warmth, time, pH level.

(4 marks)

4b)

Yeast, moulds and bacteria.

(3 marks)

4c)

Award one mark for each point.

One mark for each explanation.

(6 marks)

Hair – Hair should be clean. Hair nets/ hats/beard nets should be provided by the manufacturer and staff should be expected to wear them. Long hair should be tied back.

Hands/nails – Nails should be kept short. Sinks should be provided for staff to wash hands in regularly. Cuts should be covered with blue plasters and in some cases gloves should be worn.

Clothes – Lockers should be provided for the storage of non-work clothes. Clean white coats and aprons should be provided for staff to wear.

Jewellery – All jewellery should be removed or covered by a plaster if it cannot be removed.

Skin/mouth/nose – All have very dangerous bacteria on them. Staff should be trained not to cough or sneeze near food. If ill, staff should not be at work.

4d)

Two marks for each correct definition.

One mark for an example of each.

(6 marks)

High risk foods are high in protein and moisture and provide the ideal growing conditions for micro organisms. Examples include raw meat, cooked meat and poultry, seafood, dairy products and cooked rice.

Low risk foods do not provide the ideal growing conditions for micro organisms. They are generally high acid, high sugar or low moisture. Examples include pickles, chutneys, fruit juice, marmalades, jams and crackers.

5a)

(2 marks)

An ingredient, or part of a product, which is produced for the food company to their exact specification to simplify product production.

5b)

One mark for each point.

One mark for each valid explanation.

(10 marks)

Less effort – as there will be a reduction in the amount of stages involved with the production of the product.

Less equipment needed – specialist equipment will not be needed to produce components eg dough machines will not be needed to produce the pizza bases.

Less training required for staff – Staff will not need to know how to operate machinery such as a dough machine.

Cheaper – Less money will be needed to be spent to buy the standard components than to produce the component in the factory.

Time efficient – standard components are ready to use straight away and so can cut down the number of stages needed to produce the product.

Ensures consistency –Ingredients will be of a standard quality. Products will be of a constant size, shape and flavour as each component will be produced to a specification and the company will be able to return batches if they do not meet the required specification

6)

One mark for each function or two marks for one well explained function.

(8 marks)

Eggs

- Adds colour
- Adds flavour
- Holds air when whisked (raising agent)
- Egg yolk acts as an emulsifier

Sugar

- Sweetens
- Adds flavour
- Adds colour (caramelisation)

Flour

- Forms the main structure
- Gives a soft texture

Jam

- Adds flavour
- Adds colour
- Adds sweetness

7a)

Accuracy, time, safety, efficiency

(3 marks)

7b)

Award one mark for each use.

(6 marks)

Quiche

- To make the pastry
- To help prepare the filling eg chop vegetables, grate cheese

Soup

- To chop vegetables
- To puree soup when cooked

Pavlova

- To whisk egg whites for meringue
- To whisk cream for filling

8)

(8 marks)

Award one mark for each point.

One mark for good explanation of the point.

- Use less packaging
- Recycle more of their own waste
- Use renewable sources of packaging
- Use biodegradable packaging
- Print recycling symbols on packaging to encourage consumers to recycle