

**NATIONAL BUSINESS AND TECHNICAL EXAMINATIONS BOARD
NATIONAL TECHNICAL CERTIFICATE EXAMINATION**

BAKERY AND CONFECTIONERIES (MAY/JUNE 2006)

1. Outline the ingredients and preparation method of pineapple tart

1b. **PINEAPPLE TART**

INGREDIENTS	4 PORTIONS
Sugar Paste	100g
Pineapple	200g.
Apricot glaze or red glaze	2 teasp

METHOD

1. Cut and trim the pineapple neatly.
2. Lien flan ring and pierce and cooked to blind.
3. Tear or cut a piece of paper 2 cm (1 inch) large in diameter than the flan ring, place it carefully in the flan case
4. Fill the centre with dried peas or beans etc.
5. Bake at 200-220°C (Reg, 6-7; or 400 - 425°F) for about 30 minutes.
6. Remove the flan ring, paper and beans before the flan is cooked through
7. Eggs wash and return to the oven to complete the cooking.
8. Add pastry cream and half sliced (half of sliced ring).
9. Dress neatly in flan case.
10. Cot with glaze.

2. Define Yeast and List the essential conditions for its growth

2a. **DEFINITION OF YEAST.**

- i. Yeast is a living single-cell micro-organism and in the right conditions with food, warmth and moisture, ferments, producing carbon-dioxide and alcohol while at the same time reproducing itself.
OR
- ii. Yeast is a fungus form plant life available as a fresh or dried production
OR
- iii. Yeast is a raising agent, consist of minute fungi capable of fermenting a sugar solution, producing carbon dioxide and alcohol.
OR
- iv. Yeast is a form of fungus, which feeds on sugar solution fermenting, producing carbon dioxide and alcohol.

ESSENTIAL CONDITIONS FOR THE GROWTH OF YEAST

- i. Warmth: a good temperature for dough production is 22°C – 30°C
- ii. Moisture
- iii. Food
- iv. time

2b. Differentiate between Rum Baba & Bread Rolls, using ingredients, preparation, baking and presentation methods.

To differentiate between Rum Baba and Bread Rolls:

Rum Baba	Bread Roll
<p>INGREDIENTS: Currant 50g Small glass (Rum)</p> <p>PREPARATION: Half fill 8 greased dariole moulds. Soak carefully in hot Syrup. Sprinkle liberally with rum. Brush all over with apricot glaze.</p> <p>BAKING: Bake in a hot oven (220°C)</p> <p>PRESENTATION Dress neatly on a flat dish, it may be decorated with a rose of whipped cream, which should be sweetened with castor sugar and flavoured with a little vanilla essence. This is known as crème Chantilly.</p>	<p>NIL NIL</p> <p>Kneading Knock back Divide to desired shapes Brush with egg wash</p> <p>Bake in a hot oven (230° – 250°C) approx. 10 min.</p> <p>Present on Bread Basket as melba toast</p>

3a. Write brief note on the following:

a(i) **STARCH:** Starch is composed of a number of glucose molecules or particles. Foods containing Starch have cells with Starch granules, covered with a cellulose wall, which breaks down when heated or made moist. Starch is present in the diet through the following goods:

Whole grains e.g. rice, barley, tapioca etc.
Powdered grains e.g. flour, cornflour, ground, rice, etc.
Vegetables e.g. potatoes, peas, beans, etc.
Unripe Fruit e.g. bananas, apples, oranges etc.
Cereals e.g. corn flakes, shredded wheat, etc.
Cooked Starch e.g. cakes, biscuits, etc.
Starch is broken down into glucose during digestion.

(ii) **SUGAR:** Sugars are the simplest form of carbohydrate and the end products of the digestion of carbohydrates. They are absorbed in the form of glucose

and simple sugars. Sugar is extracted from sugar beat or sugar cane. The juice is crystallized by a complicated manufacturing process. It is then refined and sieved into several grades, such as granulated, castor or icing sugars.

Loaf or cube sugar is obtained by pressing the crystals while slightly wet, drying them in blocks, and then cutting the blocks into squares.

Syrup and treacle are produced during the production of sugar.

Fondant is a cooked mixture of sugar and glucose which when heated is coloured and flavoured and used for decoration cakes, buns, gateaux and petite fours.

There are several kinds of sugar.

Glucose: Found in the blood of animals and in fruit and honey.

Fructose: found in beat and sugar cane.

Lactose: Found in beat and sugar care

Maltose: produced naturally during the Germination of grain.

iii. **CELLULOSE:** Cellulose is the coarser structure of vegetables and cereals, which is not digested but is used as roughage in the intestine. Examples are cellulose or fibrous tissue of fruit and vegetable, whole grain foods, it is often now referred to as dietary fiber.

3b. Enumerate the food value of carbohydrate in the diet and state how cooking affects it.

i. The food value of carbohydrate in the diet are:

- a. Provide heat and energy
- b. Necessary in the diet to burn fat
- c. The roughage provides assistance to keep the digestive tract healthy.

ii. Cooking effects on carbohydrate:

- a. Starch: moist heat on starch causes the starch grains to soften and swell. Near boiling point the cellulose framework bursts, releasing the starch, which thickens the liquid. Dry heat causes the starch to change colour from creamy white to brown and after prolonged heat will carbonized and burn. Water is given off during heating and the starch on the surface is changed to dextrin, a form of sugar, as in toast.
- b. Sugar: moist heat causes sugar to dissolve in water more rapidly in hot water than in cold. On heating it becomes syrup; on further heating it colours then caramelizes and will eventually turn to carbon and ash.
- c. Cellulose: cellulose is not water soluble and is not affected much by cooking. Pectins which holds the cell walls can be particularly

dissolved by hot water. This is exactly what happens when vegetables are cooked and responsible for the softer texture of cooked vegetables and fruit.

4. Identify three types of biscuits and write their ingredients and methods of preparation.
 - i. Piped Biscuit
 - ii. Cat's tongue biscuit
 - iii. Short bread biscuit
 - iv. Almond biscuit
 - v. Cornets

PREPARATIONS

I. PIPED BISCUIT

Ingredients	Qty
Flour (soft)	200g
Butter or Margarine	150g
Castor Sugar	100g
Egg	2
Vanilla	Drops

METHOD:

- i. Cream sugar and butter or margarine until light in color and texture.
- ii. Add egg gradually beaten continuously, and 3-4 drops vanilla.
- iii. Gently fold in sifted flour, mix lightly.
- iv. Pipe on to a lightly greased and floured baking sheet using a medium sized star tube (a variety of shapes can be used).
- v. Some can be left plain, some decorated with half almonds or neatly cut pieces of angelica and glace cherries
- vi. Bake in moderate oven at 180°C – 200°C for approximately 10 minutes.
- vii. When cooked, remove on to a cooling rack using a palette knife

II CAT'S TONGUE BISCUIT

Ingredients	QTY
Flour (soft)	100g
Butter/Margarine	100g
Icing sugar	150g
Egg white	4
Vanilla	Drops

METHOD

- i. Lightly cream sugar and butter/margarine, add 3-4 drops of vanilla.
- ii. Add egg white one by one mixing continuously, mixing being careful not allow the mixture to curdle.
- iii. Gently fold in the sifted flour and mix lightly.

- iv. Pipe on to a lightly greased baking sheet using a 2mm (¼ in), plain tube, 4 cm (2in) in length.
- v. Bake in hot oven at 230-250° C for a few minutes.
- vi. The outside edges should be light brown and the centers yellow.
- vii. When cooked, remove on to a cooking rack using a palette knife.

III **SHORT BREAD BISCUIT**

Ingredients	QTY
Flour (soft)	100g
Rice flour	100g
Castor sugar	100g
Butter/Margarine	100g
Egg (beaten)	1

METHOD

- i. Sieve the flour and rice flour into a basin
- ii. Rub in the butter until the texture of fine bread crumbs.
- iii. Mix in the sugar.
- iv. Bind the mixture to a stiff paste using the beaten egg.
- v. Roll out 3mm using Castor sugar, Prick well with a fork and cut in fancy shapes.
- vi. Place biscuits on a lightly greased baking sheet.
- vii. Bake in moderate oven at 175°C-200°C (370 °F) until golden brown (approximately 15 min.)
- viii. Remove with a palette knife on to a cooling rack

IV **ALMOND BISCUIT**

Ingredients	QTY
Ground Almond	100g
Castor Sugar	50g
Egg White	1½
Almond Essence	drops
Sheet rice paper	1
Glaze cherries and angelica	

METHOD

- i. Whisk the egg white until stiff
- ii. Gently stir in the ground almonds, sugar and 3-4 drops almond essence
- iii. Place rice paper on a backing sheet
- iv. Pipe mixture using a medium star into shapes.
- v. Decorate with neatly cut diamonds of angelica and glaze cherries
- vi. Bake in a moderate oven at 175° - 250°C (375°- 400°F) for 10 – 15 min.
- vii. Trim with small knife to cut through rice paper and place on to a cooling rack using a palette knife.

V **CORNETS BISCUITS**

Ingredients	QTY
Flour (soft)	100g
Butter/Margarine	100g
Icing sugar	150g
Egg White	4
Vanilla	Drops

METHODS

- i. Lightly cream sugar and butter/margarine add 3-4 drops of vanilla.
- ii. Add egg white one by one mixing continuously, taking care not to allow the mixture to curdle.
- iii. Gently fold in the sifted flour and mix lightly. Using a 2mm plain tube, pipe out the mixture onto a lightly greased baking sheet into rounds approximately 2 ½ cm in diameter
- iv. Bake in hot oven 230 °- 250°C (450°- 474°F) until the edges turn brown and the center remains uncoloured.
- v. Remove the tray from the oven.
- vi. Work quickly while the cornets are hot and twist them into a cornet shape using the point of a cream horn mould.

4b **Distinguish between scones and pancakes**

Scones are products, which are derived under the method of a cake making. Scones are prepared by rubbing – in – method. The comparatively small amount of fat, rapid mixing to soft dough, quick and light handling are essentials to produce a light scone.

Scones are baked in the oven at 200°C (Reg. 6: 400°F) for 15-20 minutes. Scones are shaped in form of circle ball and placed on a greased baking sheet.

Pancake is a product, which is classified under sweet and derived from the mixture of batter. The preparation and ingredients are simple (flour, milk or water and usually egg.)

Small fat is used in preparation. A special pan is used for pancakes and not allow it sticking. This, like an omelet pan, should not be washed, but be cleaned by rubbing with absorbent paper and salt if necessary. Cooking of pancakes cannot be done successfully in a thin or buckled pan. When preparing a batch of pancakes it is the best to keep them all flat, one on top each other on flat plate. When serving pancake it is folded.

4c. **HOW IS RUM (FLAMBÉ) OMELETTE PREPARED?**

PREPARATION OF RUM (FLAMBE) OMELETTE

- i. Present the omelette, return to the lamp
- ii. Trim the ends of the omelette with the aid of a service spoon and fork

- iii. Sprinkle with caster sugar
- iv. Pour a measure of a rum round the edge of the flat
- v. Heat quickly, light with a match
- vi. Server immediately on to a hot sweet plate at the table

5. TRANSLATION OF TECHNICAL TERMS INTO ENGLISH

- i. ABOYEUR: Person who calls out the orders in a kitchen. He reads the order received from the restaurant and dictates to the kitchen staff for preparation of food ordered.
- ii. CUISINE: It is culinary term used internationally to qualify kitchen or cooking area of a standard
- iii. DARNE: A slice of fish cut with the bone (for round fish) e.g. salmon.
- iv. CUIT: Generally it means “cooked”. It is used to denote cooking of steak to certain degree for example cuit a point which means medium cooked. Bleu means very underdone. Saignant means very rear (that is bloody). Bien cuit means well cooked or cooked thoroughly
- v. CIBCASSER: This can be applied to cutting of vegetable roughly chopped e.g. tomatoes, parsley etc.
- vi. DEGRAISER: This is a technical term used in removing excess fat during cooking food or to skim fat of liquid.
- vii. ENTREMETS: It can be used in two ways
 - i. when it is used in MENU; it means SWEET course
 - ii. When it is used to qualify VEGETABLES (entremets de legumes)
- viii. ESTOUFFADE: This term can be used in two ways;
 - i. Food slowly stewed
 - ii. Basic brown stock
- ix. GLACER: It can be used in two ways;
 - i. to freeze
 - ii. to pass rapidly under the gill i.e. to glaze under salamander
- x. JUS: This can be used in two ways;
 - i. Juice in beef
 - ii. Fruit juice
- xi. MANDOLIN: It is classified as small utensils (Equipment). To prevent the blades being rusted, it should be cleaned in hot detergent water, dried and greased slightly.
- xii. PUREE: This means a smooth pulp obtained by passing certain foods through a sieve or a blender (liquidizer). It is mostly applied to certain types of vegetable soups

6a. WHAT ARE GELS?

Gels are low pectin types mixed with high pectin fruit, which contains long chains of sugars to form a network trapping water.

6b. **GIVE THREE PROPERTIES OF GELS AND THEIR USES**

PROPERTIES are: A firm gel depends on:

- i. Percentage of pectin
- ii. Molecular weight of the pectin
- iii. Percentage of methyl ester groups
- iv. Amount of sugar
- v. PH of the mix.

USES:

- i. It can be added to natural juice products to give a permanent cloudiness
- ii. It is used as a stabilizer in ice-cream products to prevent large crystals forming
- iii. It may also be used in mayonnaise as an emulsifying agent

6c. **CLASSIFY FATS AND GIVE TWO EXAMPLES OF FOODS CONTAINING EACH CLASS OF FAT.**

FATS CAN BE CLASSIFIED AS:

- i. Animal. Examples of foods are fatty meat, fatty fish, egg yolk, butter, cream, cheese, milk, lard, dripping, etc
- ii. Vegetable oils, examples of foods are olives, nuts, vegetable oils, and their products e.g. margarine, peanut butter, olives oil, Soya bean, corn oil, etc

6d. **GIVE THE PROPERTIES AND USES OF FAT**
PROPERTY OF FAT

- i. Fats are composed of glycerol to which is attached three fatty acids (butyric acid, stearic acid and oleic acid) hence the name is triglyceride.
- ii. Fats melt to oils when heated
- iii. When it is hot; it gives a faint blue haze appearance.
- iv. It gives unpleasant smell when burning which is caused by the presence of fatty acids

USES OF FAT

- i. A concentrated source of heat and energy
- ii. Aid digestion by slowing the process to allow more time for digestion in the stomach
- iii. Protective layers of fatty tissue) a. prevent loss of body heat. b. Surround and protect some internal organs e.g. kidneys.
- iv. Source of fat-soluble vitamins A, D, E, K.

7a. **EXPLAIN THE EFFECT OF STORAGE ON THE FOLLOWING FOOD ITEMS:**

I ROOT VEGETABLES

- a. The most important thing to remember in storing root vegetables is that if they are stacked one on top of the other, they will sweat and begin to rot.
- b. If vegetables are stored at the incorrect temperature micro-organisms may develop
- c. If vegetables are stored in damp condition moulds may develop
- d. If vegetables were stored for too long they would lose vitamin C
- e. The fresher the vegetables the better the flavour so that ideally they should not be stored at all.

II LEAFY VEGETABLES:

- a. The greener the leaf the larger the quantity of vitamins present but, when it is stored, part of the Nutrients are lost to the atmosphere
- b. The leaves must be bright in colour, crisp and not wilted but when leafy vegetables are stored, colour is changed to yellowish green colour
- c. It is not advisable to store leafy vegetables for long time otherwise, it will dry off.

III PALM OIL

- a. Oil should be kept in a cool place and it may lose taste if stored for a longer period
- b. Oil kept for a fairly long time may change in quality (rancidity)
- c. If refrigerated some oils congeal, they return to a fluid state in a warm temperature.

IV EGGS:

- a. Where the eggs are washed before storage the natural protective coating would be removed.
- b. The egg shells are porous and when the eggs are stored with strong smelling foods, the eggs will absorb strong odours
- c. When an egg is stored for a longer period it loses the part of the nutrients to atmosphere where the colour is changed.
- d. When an egg is stored it loses the original taste (freshness).
- e. When eggs are stored they may be cracked.

7b. **“UNLESS FOODS ARE PRESERVED, THEY DETERIORATE”, Discuss the above statement** using eight methods of food preservation with different types of food.

- i. This method of preserving is achieved by extracting the moisture from the food, thus preventing moulds, yeasts and bacteria from growing. This was done by drying foods, such as fruits, in the sun; today other types of equipment are used, and the food is dried by the use of air at a regulated temperature and humidity.

Foods preserved by drying are:

Vegetables: peas, onions, beetroot, beans, carrots, lentils, cabbage, mixed vegetables, Potatoes fruits: apples, pears, plums (prunes), apricots, figs, grapes (sultanas, raisins, currants,). Others: Herbs, Eggs, Milk, Meat, Fish

ii. Chilling and freezing:

Refrigeration is a method of preservation. Where the micro-organisms are not destroyed or killed, they are only prevented from multiplying. The lower the temperature the longer foods will keep. Refrigerators prevent foods from spoiling for only a short time, most frozen foods can be kept at -170°C for a year at -28°C for tow years. Foods must be kept in a deep freeze until required for use.

Cold chilled storage of fresh foods merely stops the distortion (decoy) of the food; it does not prevent it from eventually going bad. The aim of chilling is to slow down the rate of spoilage; the lower the chill temperature within the rang $-1^{\circ}\text{C} = 8^{\circ}\text{C}$ the slower the growth of micro – organisms and the bio – chemical changes which spoil the flavour colour, texture and nutritional value of foods. Lowering the temperature to this range also reduces food poisoning hazards although it is important to remember that the food should not be contaminated before chilling

Foods preserved by chilling are
Beef, chicken, lamb etc.

Foods preserved by freezing are:
Fish, meat, poultry, peas, etc.

iii. Canning and bottling:

Bottled and canned foods are sealed in air – tight bottles or tins and heated at a high enough temperature for a sufficient period of time to destroy harmful organisms.

Foods preserved by Canning are:
Fish, Milk, Ham, Fruit, Meat,

Foods preserved by bottling are:
Fruit, Herbs, Milk, Vegetables etc.

iv. Preservation BY Salting and Smoking micro – organisms cannot grow in high concentration of salt.

Foods preserved by Salting are:
Fish, Meat, Poultry etc.

Foods preserved by smoking are:
Fish, Meat, Poultry etc.

v. Preservation by chemicals

Certain chemicals are permitted by law to be used to preserve certain foods such as sausages, fruit pulp, jam etc. also for domestic fruit bottling.

vi. Preservation by acids:

Foods may be preserved in vinegar, which is acetic acid diluted with water.

Foods usually pickled in vinegar are:
Gherkins, capers, onions, shallots, etc

vii. Preservation by radiation:

Foods subjected to certain rays, for example x-rays or gamma rays are preserved.

viii. Preservation by gas storage

Gas storage is used in conjunction with refrigerators to preserve meat, eggs, and fruit. Extra carbon dioxide added to the atmosphere surrounding the foods, increases the length of time they can be stored.