

Paper/Subject Code 82401/Food Production-I

Q1.A) Define the following Terms:

1) Liason: In addition to being a thickening agent, the liaison of egg yolks and cream is used to finish a sauce by giving extra richness and smoothness.

2) Remouillage: the word translates as a "rewetting", which is a good way to think of the way that remouillage is made. Bones used to prepare a "primary stock" are reserved after the first stock is strained away from the bones. The bones are then covered with water, and a "secondary stock" is prepared. Some chefs argue that, if the first stock was made properly and simmered for the correct amount of time, there will be little if anything left in the bones to provide either flavor or body in the remouillage.

3) COAGULATION: Coagulation is defined as the change in the structure of protein (from a liquid form to solid or a thicker liquid) brought about by heat, mechanical action or acids. Enzymes may also cause protein coagulation e.g. cheese making.

4) Deglazing: To "*de glaze*" means to swirl a liquid in a sauté pan or other pan to dissolve cooked particles of food remaining on the bottom of the pan. It is an important technique for finishing sauces that accompany sautéed items. A liquid such as wine or stock is used to deglaze a sauté pan and then reduced by one-half or three-fourths. This reduction with added flavour of the pan drippings is then added to the sauce that is served with the item.

5) Cloute: Onion when Studded with bayleaf and cloves infused in milk for making béchamel sauce is known as a cloute.

Q.1 B) Fill in the blanks:

- 1) Diamante / Lozenge.
- 2) 60 degree centigrade
- 3) Vitelline membrane.
- 4) Hollandaise
- 5) Chef de tournant.

Q1 C) Match the column:

- | | |
|-------------------|-----------------------|
| 1) Tartar Sauce | Mayonnaise |
| 2) Caramelization | 163C |
| 3) Slurry | Thickening agent |
| 4) Potager | Responsible for soups |
| 5) Rechauffe | Reheat |

Q.2) Answer ANY THREE of the following:

- 1) List down various textures and consistencies. List any 5 methods and techniques of

preparing food

The term TEXTURE is used to describe the characteristics of a finished (ready-to-eat) food product. The final product will have a certain texture depending on • the order in which ingredients are added • the way of mixing • the method of cooking A correct texture has to be brought about in the food. The chef should not only know the correct texture, but should be able to produce the same in the food. The various textures which are listed down, are difficult to explain in words, they should be felt and understood better. There are very thin differences between some of these, which one should learn better during practical.

- 1) Firm and close – biscuits and plain short pastries can explain this texture. biscuits are not too hard either, because of the fat included.
- 2) Short and crumbly – nankhatai and tarts are good examples of this texture. Fat included is more than that in biscuits, so it breaks more easily into smaller particles.
- 3) Spongey – Swiss rolls, sponge cakes, idli and dhokla are spongey. A soft, elastic texture due to incorporation of more air results in this texture.
- 4) . Light – Madeira cake has plenty large holes in it, making it ‘light’. It is firm, but not hard and tough. It is neither as short as a tart nor as spongey as a Swiss roll.
- 5) Flaky – chiroti, lacchha paratha, chicken or veg puffs and khara biscuits are flaky. Thin, crisp layers are formed by spreading fat in between two layers of dough which get separated during baking / frying and remain separated due to air pockets. The flakes by themselves should not be tough / hard. Ideally the layers break easily and melt in the mouth.
- 6) Coarse – large and uneven holes are a result of too much of the raising agent or too little liquid.
- 7) Hard – another texture which should be avoided as far as possible. In fact, it is considered to be a fault in the product

Like different textures found in solid foods (which are mentioned above), different ‘consistencies’ are found in liquid foods. Some substances flow readily, others resist flow and some require force or weight application to start flow. The concept of consistency is closely related to viscosity. Factors affecting consistency of liquid are • Concentration (of thickening agent) • Temperature • Degree of dispersion • Mechanical treatment • Time (how long is it after preparing)

Generally speaking, the following consistencies could be found in liquid foods –

A. Pouring – like water and milk. These do not show any resistance and flow easily / readily. Stocks and some thin soups like consommé are examples of ‘cooked’ liquids having pouring consistency.

B. Coating – when a starchy thickening agent is mixed with a liquid, and the mixture is heated, the starch gelatinizes. In case of a protein as a thickening agent, it coagulates when exposed to heat. In both these cases, the liquid starts to thicken. If a spoon is dipped in this mixture, it starts coating the spoon. A thin film of the mixture could be seen in the beginning. Later on it goes on becoming visibly thicker.

C. Dropping – when a liquid is added to dry flour, it forms lumps as only some flour (granules) gets combined with liquid. Later, when added more liquid, it converts into dough and with some more liquid, it turns into ‘batter’. Here, the amount of solid (flour) is more than the liquid.

Methods & techniques. When raw materials are ready to be cooked, they are sent to the preparation area or hot section of the kitchen where it gets exposed to heat. Following are some of the techniques in preparation. List may be enriched as and when you start actual cooking.

- Stirring – this mixes two or more ingredients as they get cooked. Wooden / stainless steel flat spoons, round spoons, perforated spoons etc. of various sizes could be used. Liquids as well as solid and semi-solid ingredients need stirring. Generally it helps in even dispersion of heat leading to even cooking.
- Masking – to prevent food from getting burnt in case of baking / roasting, it needs to be masked with some other food material. It can also be done to get a desired colour and appearance.
- Coating or dipping in batter – as mentioned earlier, batter is a mixture of flour and liquid (mostly equal quantities). Certain foods are dipped in batter and deep fried. The most apt example would be potato vadas. The batter should coat the stuffing fully and not expose any stuffing. This needs skill, because food should be dropped in hot oil immediately after dipping in batter. So, in a split of a second, the process has to be completed. Thus, the consistency of the batter plays a very important role.
- Basting – this is a technique which goes hand in hand with roasting. This means to apply fat / butter on the food while being roasted. It helps by protecting the surface from going dry and also by giving a pleasant brown colour to the roasted food.
- Tadka / baghar – these terms and technique are used in Indian cuisine. Oil is heated to the required temperature and certain spice ingredients are added to it (which should crackle,) then the food (like cooked dal or chopped vegetables) are combined with this. It develops additional taste and flavour to the dish. A peculiar flavour which is the characteristic of the dish can be added through the ingredients in the tempering. Sometimes, continental dishes, especially rich soups and sauces are also ‘tempered’; but the technique is applied for a different purpose and using different ingredients. A mixture of egg yolk and cream (liaison) is added to a dish to enrich it, to give it a glaze and to make it smooth. A little of the hot soup / sauce is first mixed with the liaison, and then it is slowly stirred into the larger quantity of soup / sauce.
- Seasoning – seasonings bring about the natural taste and flavours of the ingredients. No dish can be complete without seasonings.
- Flavouring – these are those ingredients which impart additional flavours in the dishes. Nutmeg powder in creamed potatoes, cardamom powder in Indian sweets like kheers, vanilla essence in vanilla buns are some of the examples. Flavourings could be added in various forms – powders, drops or whole spices (which are removed before serving the dish to guest).

2) What so special about the chef coat and write any four points that need to be considered while designing the uniform for the kitchen staff.

It is important that people working in the kitchen should wear suitable clothing and footwear. Suitable clothing must be
Protective • Washable • Of a suitable colour • Light in weight and comfortable • Strong • Absorbent

1. Chef Coat/Chef Jacket

Clothes worn in the kitchen must protect the body from excessive heat. For this reason, Chef's Jackets are double breasted and have long sleeves. They are to protect the chest and arms from the heat of the stove and to prevent hot foods or liquids burning or scalding the body.

3) List and explain various fuels in the kitchen.

Various fuels used in kitchen are

1) L.P.G Liquefied propane and butane, compost fuel in the kitchen to fuel gas burners. This gas is supplied in industrial cylinders or in bulk storage tanks. It is supplied to the kitchen through a pipeline. The LPG cylinders are stored in a separate place usually called a gas bank and it is usually operated by the kitchen stewarding department. A certain gas pressure is maintained by the stewarding department as certain ranges require high pressure for cooking LPG is liquefied under pressure & converts into gas when the pressure is released.

One of the most essential fuels used in the kitchen & is known for its efficiency. Used for cooking ranges, ovens & salamanders.

2) C.N.G Compressed natural gas is slowly gaining popularity in fuel efficiency and environment friendly Used in eco friendly hotels

3) Coal It is a very crude form of fuel to be used in a modern kitchen and still very popular. The smoky flavor which the charcoal imparts is much desired. It should always be stored away from food area ideally in a cool dark room away from moistures. In tandoors and grills for BBQ.

4) Wood: Wood ovens are normally used today in pizza restaurants. Even though it is operated by LPG few logs of wood are placed inside to impart a smoky flavour to the pizza. Used in a pizza oven

5) Electricity : It is used to operate many types of equipment. In India equipment works on 220 volts. Some of the heavy duty equipment use 3 phase electricity current & some use only a single phase. Used to operate most equipment as it is easy to control.

6) Steam: Most of the hotels produce steam which is used to cook or operate equipment. It is supplied to the kitchen through insulated pipes. Used in dishwashers and steamers

7) Solid Fuel: This is made from petroleum jelly and comes in small tins. Normally used under the chaffing dishes. Used in F & B

8) Solar Energy: The heat from the sun is used as a fuel. Many eco-friendly hotels have solar cookers that are used for cooking. Solar cookers utilize solar heat to cook food.

4) Why are bones blanched prior to Stock making, specifically with White Stocks? Why are stocks started in cold water

Stocks are flavorful liquids produced by simmering bones, meat trimmings, vegetables and other aromatic ingredients in water. Stocks are further categorized as white stock or brown stock. They are used as the foundation for soups, stews and sauces. They are not served "as is", however.

Bones are blanched prior to the making of white stocks because this helps us to get rid of any physical impurities like connective tissue, blood clots, or fat present on the bones.

Blanching of bones also ensures the stock remains clear and it does not become cloudy.

White stocks are started in cold water as it allows the flavours and proteins to dissolve better in the water gradually and produce a well flavoured stock.

When the stock is started in cold water it also ensures there is no agitation in the water and is easy for us to skim the stock and produce a good quality stock.

5) List the aims and objectives of cooking food.

Cooking means exposing food materials to heat. The medium of transfer of heat from its source could be water, air or oil. This will be dealt with in detail at a later stage. First let us understand why we need to 'cook' food. Cooking is the Application of heat to food for the purpose of making it more digestible, safer to eat, more palatable and to change its appearance. In the cooking processes heat breaks down the cellulose in plant foods, softens some of the connective tissues of meat, breaks down and gels starches present, changes and blends flavours within the food, destroys bacteria and makes food more acceptable to humans and human digestion.

Aims & Objectives of Cooking

1. Sterilization: It is the process of killing pathogenic bacteria and worms present in the food. Boiling and freezing are two popular methods of sterilization.

2. Preservation: Cooking also helps to preserve the food for a longer time with the help of spices, oils and sugar syrups, etc., mixed with it while being processed.

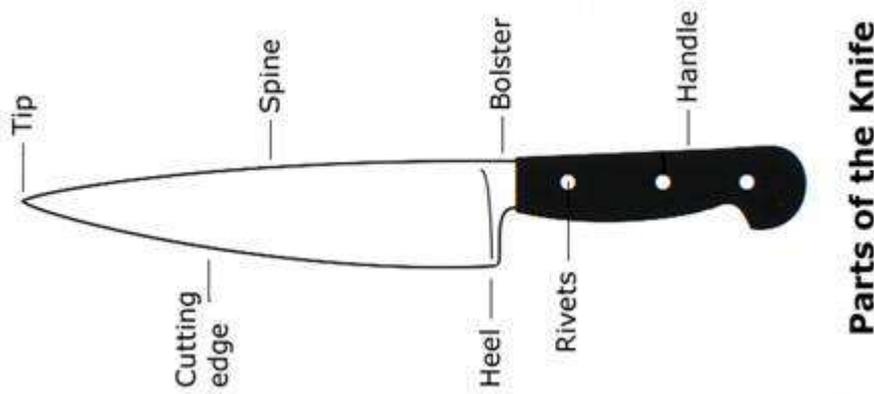
3. Digestibility: Cooking also helps in digestibility of certain vegetables and raw food which cannot be digested if taken uncooked.

4. Appetizing: Cooking gives an appearance to the food which makes it presentable and also appetizing. On application of heat, the red colouring matter such as haemoglobin in meat decomposes and changes the red colour to brown. Flavours are developed, which stimulate the digestive juices. The colours of vegetable are brightened.

5. Enhancement of nutritive value: Though cooking may destroy certain vitamins it usually enhances its nutritive value by breaking up heavy materials like fat into digestible particles.

6. Variety: Cooking produces variety from the same ingredients. Several type of preparation can be made from one raw ingredient.

6) Draw and label the various parts of a knife and list at least 5 types of knives used in kitchen.



This list includes only the most basic knives and sharpening equipment

1. **FRENCH OR CHEF'S KNIFE** An all purpose knife used for chopping, slicing and mincing Its rigid 8 to 14 inch long blade is wide at the heel and tapers to a point at the tip.
2. **UTILITY KNIFE** and all purpose knife used for cutting fruits and vegetables and carving poultry its rigid 6 to 8 inch-long blades is shaped like a chef's Knife but narrower.
3. **BONING KNIFE** is a smaller knife with a thin blade used to separate meat from Bone. The blade is usually 5 to 7 inches long and may be flexible or rigid.
4. **PARING KNIFE** a short knife used for detail work or cutting fruits and vegetables the rigid blade is from 2 to 4 inches long. A tour née or bird's beak knife is similar to a paring knife but with a curved blade It is used to cut curved surfaces or tour née vegetables.
5. **CLEAVER** a Knife with a large, heavy rectangular blade used for Chopping or cutting through bones.
6. **SLICER** A knife with a long, thin blade used primarily for slicing cooked meat. The tip may be round or pointed, and the blade may be flexible or rigid. A similar knife with a serrated edge is used for slicing bread or pastry items.
7. **BUTCHERS KNIFE** sometimes known as a scimitar because the rigid blade curves up in a 25- degree angle at the tip, it is used for fabricating raw meat and is available with 6 to 14-inch blades.

OYSTER AND CLAM KNIVES The short, rigid blades of these knives are used to open oyster and clam shells. The tips are blunt; only the clam knife has a sharp edge

Q.3 Answer ANY THREE of the following:

1) List and explain the composition of a salad.

A salad is derived from the Italian word "insalata". Insalata means a dish steeped in salt or brine solution. Salads are made up of meat, poultry, fish, game, shellfish, eggs, vegetables, fruit and milk products and normally serve cold. They can be made out of single ingredients or a combination of ingredients. Salads are generally served as an accompaniment to a dish but can be served as a course itself, an appetizer, sweet course (fruit salad).

THE SALAD COMPRISES OF FOUR PARTS

1. The under liner or base: these are generally greens either shredded or in large pieces. The greens must be crisp and chilled. This can be done by storing them in refrigerator. E.g.

Lettuce leaves, cabbage leaves, watercress leaves etc. The main purpose is to keep the plate or bowl from looking bare and to provide contrast colour to the other parts of the salad.

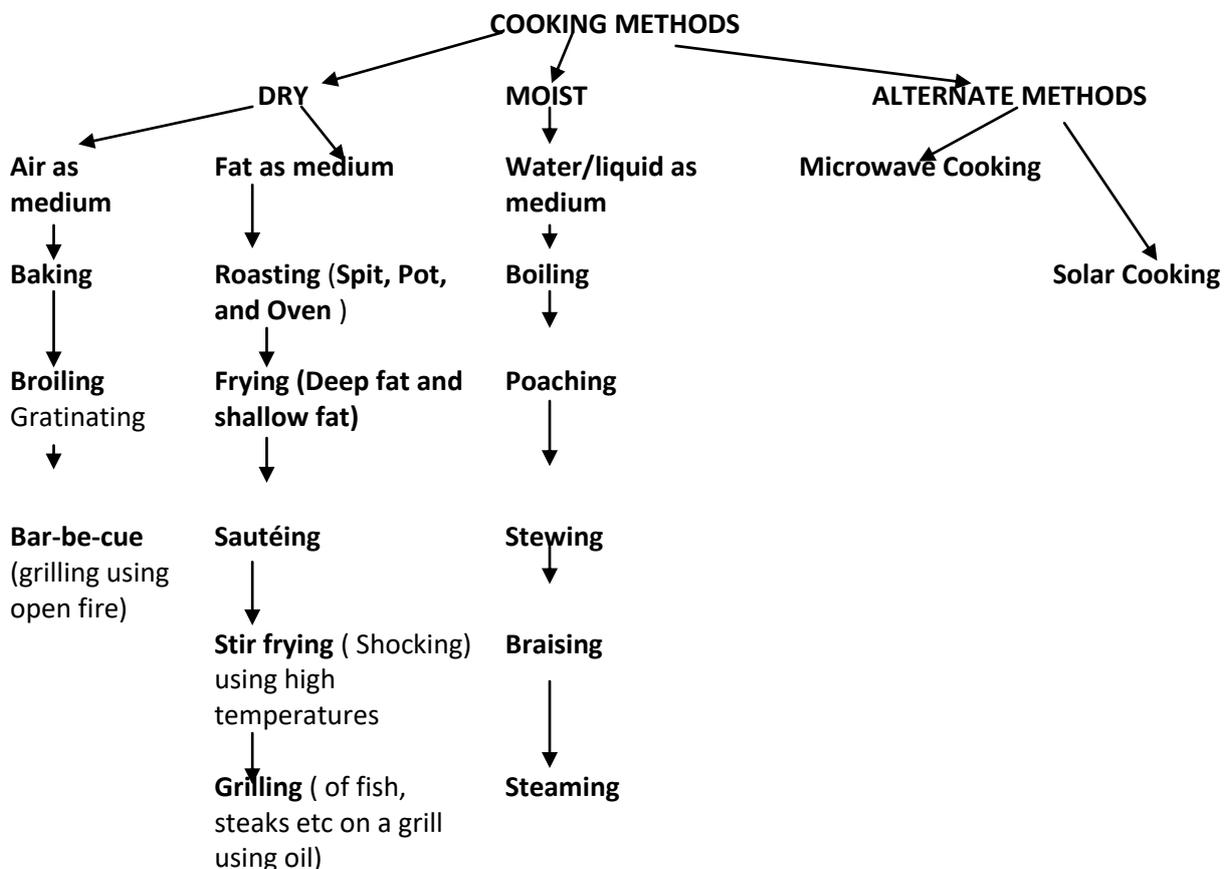
2. The body or heart of the salad: this is the major component and can be made of one ingredient or a combination of ingredients. Ingredient should be fresh. Body constituents are the major portion of the salad. The salad gets its name from the ingredients that are used for the body.

3. Garnish: the purpose of garnish is to give eye appeal to the salad, though it often adds to the flavour as well. It should not be elaborate or dominate the salad. Garnish should harmonize with the rest of the salad ingredients and, be edible. Any of the fruit and vegetable, cut into simple, appropriate shapes, may be used as garnish.

4. Dressings: these make the salad more appetizing, although diet conscious people today eat salad without dressing. Various kinds of dressing are used in the preparation of salad depending upon the kind of salad to be made. It adds flavour, provides food value, helps in digestion and improves palatability and appearance. A dressing is in a liquid or semi liquid form.

2) Classify methods of cooking in a tabular form giving 2 suitable examples for the same.

Cooking means exposing food materials to heat. The medium of transfer of heat from its source could be water, air or oil. Cooking methods are broadly classified as “dry heat method” and “moist heat method”.



3) Classify vegetables giving suitable examples in a tabular form.

CLASSIFICATION OF VEGETABLES Vegetable: Vegetables refers to all plants or parts of plants which can be eaten raw, cooked or preserved in some form. Vegetables are of great importance in our diet and especially with regard to the present trend when the people are shifting towards the vegetarian side. These play a very important role in our diet properly chosen, properly cooked or raw. They make an invaluable contribution towards the supply of vitamins and minerals. Whenever possible, we should serve two vegetables in our diet also. Salads should be given the importance and hence must be made in both the meals. Generally vegetables have high water content, which ranges from 70-90%. A useful way of classifying vegetables is to think in terms of what part of the plant is eaten:

- Roots- carrots, turnips, etc
- Tubers- potatoes
- Bulbs-onions
- Leaves- cabbage, spinach, lettuce, etc
- Fungi – mushroom
- Legumes – beans, peas
- Marrows- pumpkins, gourds
- Stems- celery, fennel, asparagus,
- Vegetable fruits- tomatoes, peppers

In general fresh vegetables should be:

- Clean, no soil- some soil may be acceptable on new potatoes and on organic produce
- Compact & crisp
- Of good color, shape and appearance
- Free from damage- no bruising or cuts
- Free from disease or pet damage

4) List down the degree and stages of cooking sugar.

COOKING STAGES & TEMPERATURE OF VARIOUS STAGES

- 1) Thread Stage 106C – 112C
- 2) Soft Ball Stage 112C – 116C
- 3) Hard Ball Stage 121C – 130C
- 4) Soft Crack Stage 130C – 137C
- 5) Hard Crack Stage 137C – 145C
- 6) Caramel 160C – 170C
- 7) Black Jack 170C – 177C

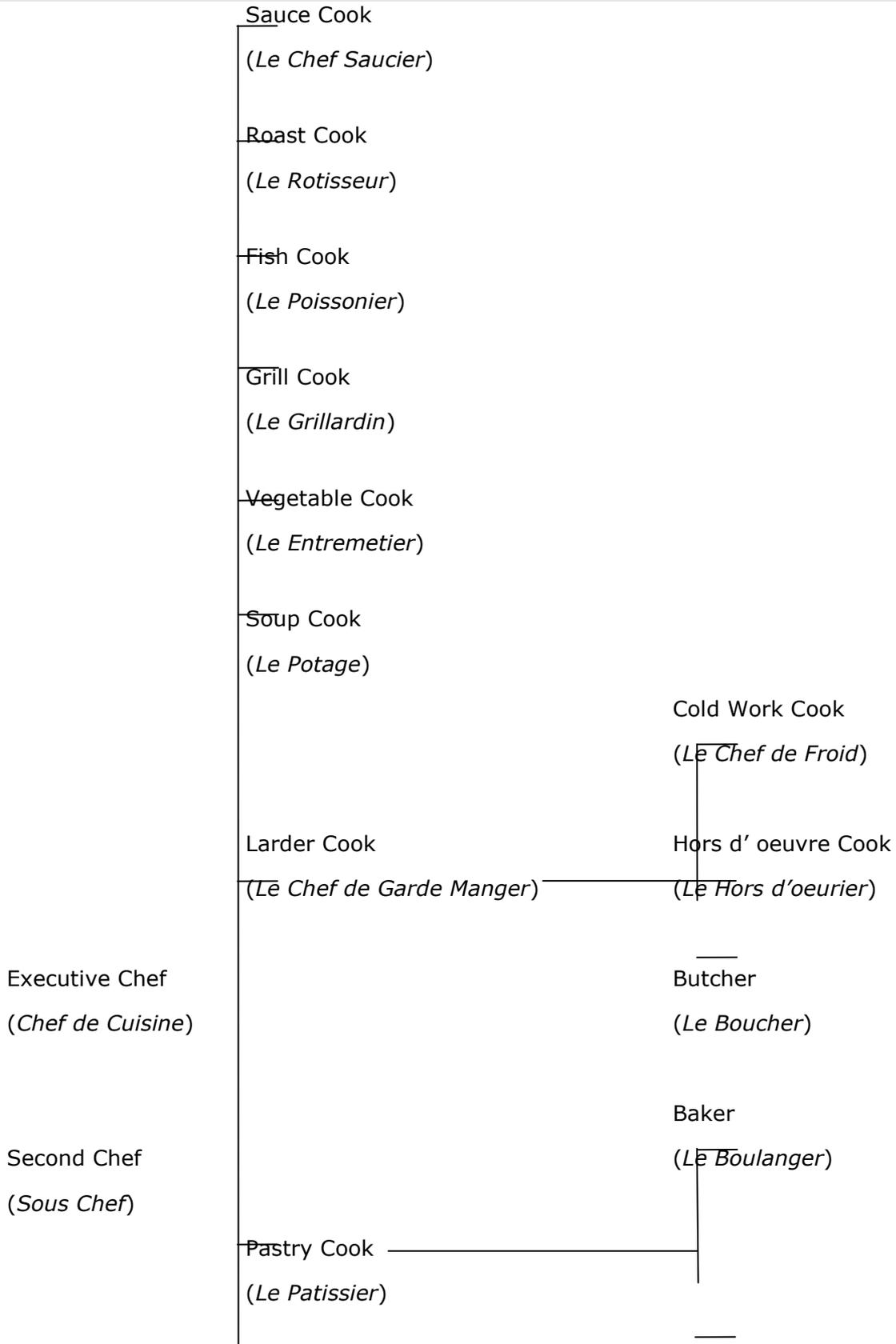
5) List down 5 uses of eggs with examples.

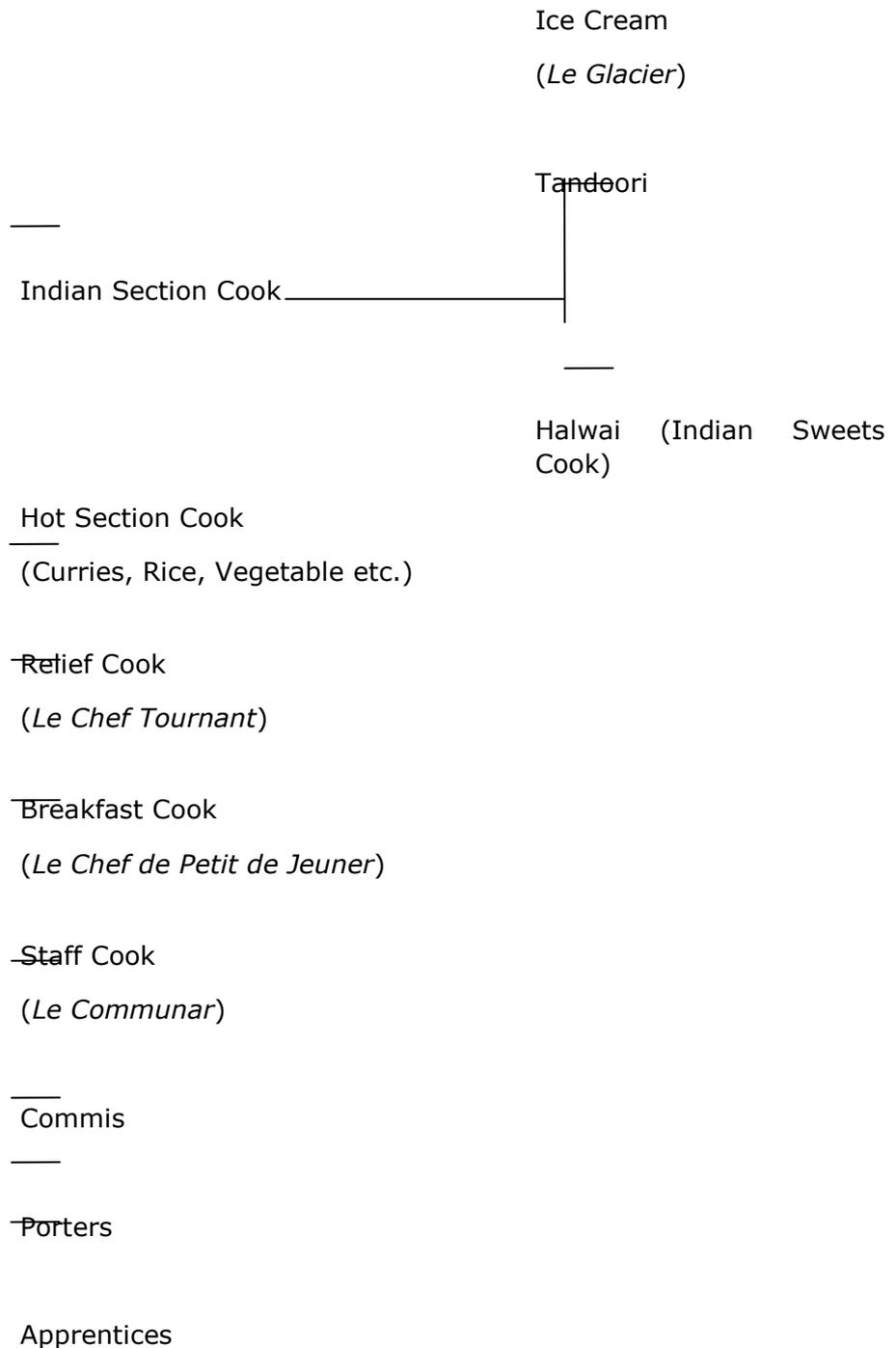
USES OF EGGS

- 1) Binding agent: eggs are used as binding agents for example croquettes.
- 2) Leavening agent: this property is exhibited by the eggs when we whip the egg white, the air gets entrapped inside the egg white & hence the egg acts as leavening agent for example sponge.
- 3) Coating agent: egg acts as coating agent in various dishes such as cutlets, poulet maryland etc.
- 4) Emulsifying agent: eggs act as emulsifying agents in case of emulsion such as mayonnaise (oil & water).
- 5) Thickening agent: eggs act as a thickening agent in gravies, sauces, soups etc.
- 6) Clarifying agent: in case of consommé, the egg acts as clarifying agent, where it clarifies the soup by entrapping impurities present in the soup.

6) Draw an organizational chart of a 5 star hotel .List three duties of the Executive Chef.

MODEL STAFF ORGANIZATION OF A LARGE KITCHEN
(La Brigade de Cuisine)





Planning menu: he has to take into consideration all the factors which influence the planning of menus and the chef has to take a critical note of all the activities which are important in the menu planning. Care should be taken of various things such as eating trends, raw materials availability and variety of the meals.

2) Forecasting: before indenting and buying, the chef must be able to produce the accurate estimates of the volume of production. He must consider the following points:

- a) Previous year's sales during the same time period.
- b) Sales forecast from f & b service departments.

c) Volumes of daily enquiries for the parties.

d) Chef's own experience.

3) Purchase: the food cost will go up if the purchasing is not done in an optimum manner. Excessive raw materials results in pilferages whereas shortage of raw materials results in the loss of business and decreases the no. Of clientele.

4) Planning work schedule: it is the duty of the executive chef to ensure that the schedule of work is planned in such a way that enough work forces are available all the time. So, the work schedule should be properly planned in order to ensure man power availability during the peak season and festival time.

5) Staff hiring: although the final decision rests with the personnel manager but the details of the staff hiring are given by the executive chef because he is the one who is actually taking part in the day-to-day operation.

6) Training: the chef will give the demonstration of the new dishes which he wants to introduce in the menu. So, its duty to plan the training program's not only for the new comers but also for the existing staff.

7) Supervision of the staff: it is the duty of the chef to delegate the authority amongst the various chefs working under him to ensure that the staff is performing duties as per his expectation.

8) He is responsible for the overall working of the kitchen.

9) He is one who is responsible for maintaining close liaison with the other departments to ensure the balance in the operations.

10) He represents his team to the management. So, it is his duty to convey the feelings of the staff members under him to the top management and hence ensure a good employer-employee relationship.

11) He presides over the departmental meetings from the kitchen side.

12) He is responsible for the aesthetic upkeep of the kitchen department.

13) He is responsible for organizing festivals in the organization.

14) He is responsible for ensuring a proper pest control procedure to be followed during a given time period.

15) He is responsible for maintain the discipline and decorum in the kitchen.

16) has to have a real commitment in terms of efforts and willingness to learn the skills involved.

17) He is familiar with the safe preparatory techniques for handling food and equipment.

18) He is responsible for ensuring the high standards of personal hygiene and hygiene of food and equipment.

19) He is very creative, innovative and dedicated in his work.

20) He is very cooperative, courteous and honest when it comes to work.

Q4. Answer ANY THREE of the following:

1) List and explain the steps in bread making

There is a sense of mystery in watching basic ingredients like flour, water, sugar and salt respond to the power of yeast. The gluten stretches and expands as air pockets form. The sugar colours with the heat and become golden. What was simply a spongy mass miraculously becoming a veritable work of art, a very edible work of art. Components and their Contribution to Bread Making Bread is composed of various ingredients, each playing a particular role and contributing to the flavour and texture of the finished product.

Steps in Bread making 1: Scaling All ingredients are measured. We would like to recommend two things for this step:

1. Measure all wet and dry ingredients by weight. 2. Use a formula that is expressed in "baker's math" or "baker's percentages."

This step concludes when all ingredients are accurately measured and lined up in order of use, as well as all tools and equipment are ready for the second step in the bread-making process.

Step 2: Mixing Ingredients are combined into a smooth, uniform dough; the yeast and other ingredients are evenly distributed through the dough, the gluten is developed, and fermentation is initiated.

Step 3: Bulk or Primary Fermentation The dough is allowed to ferment. Fermentation is the process by which the yeast acts on the sugar and starches and produces carbon dioxide and alcohol.

Step 4: Folding The purpose of this step is to degas the dough, and we do that for four reasons: to expel some of the carbon dioxide, and avoid by that choking the yeast; to allow the gluten to relax a bit; equalize the temperature of the dough; and to redistribute the nutrients necessary for the yeast's continued growth.

Step 5: Dividing or Scaling The dough is divided or scaled into the desired individual portions.

Step 6: Pre-shaping or Rounding The portioned dough is loosely shaped into smooth, round balls. This organizes the dough into consistent pieces and makes the final shaping easier and more efficient. It also stretches the gluten on the outside of the dough and forms a skin that helps it retain the gases produced by the yeast.

Step 7: Resting The benching or resting lasts approximately 20 to 30 minutes and relaxes the gluten, making the final shaping of the dough easier.

Step 8: Shaping and Panning The dough is formed into its final shape and placed in the pan or mold that it will be baked in. Hearth breads that will be baked directly on the oven deck are placed in bannetons or between the folds of baker's linen.

Step 9: Proofing or Final Fermentation The dough goes through one final fermentation. The dough should be placed in a temperature and humidity controlled environment to allow the bread to rise to the desired volume before baking. Optimum rise for this stage is 80 to 85 percent of the dough's overall volume.

Step 9: Proofing or Final Fermentation The dough goes through one final fermentation. The dough should be placed in a temperature and humidity controlled environment to allow the bread to rise to the desired volume before baking. Optimum rise for this stage is 80 to 85 percent of the dough's overall volume.

2) Write a short note on raising agent giving suitable examples

Raising agents are also known as leavening agents. Leavening is the production or incorporation of gases in a baked product to increase volume and to produce taste and texture as well as shape. These gases must be retained in the product until the structure is set enough by the coagulation of gluten and /or egg protein to hold its shape. Exact measurement of leavening agents is important, because small changes can produce major defects in baked products. TYPES OF RAISING/LEAVENING AGENTS Biological: Yeast Chemical: Baking powder, Baking soda, Baking ammonia Mechanical: Air, Steam

YEAST Fermentation is the process by which yeast acts on carbohydrates and changes them into carbon dioxide and alcohol. This release of gas produces the leavening action in yeast products. The alcohol evaporates completely during and immediately after baking. The process of fermentation is brought about by an enzyme called zymase.

Yeast is a microscopic plant. As a living organism, it is sensitive to temperatures. 45°F (7°C) Inactive; storage temperature 60-70°F (15-20°C) Slow action 70-90°F (20-32°C) Best growth, proofing temperature for dough Above 100°F (38°C) Reaction slows 140°F (60°C) Yeast is killed

Yeast will contribute to flavour in addition to leavening action. There are various market forms of yeast, which are available.

Dried Yeast: is a mixture of yeast and corn flour or cornmeal, which are pressed into cakes and dried. The yeast continues to live, but in an inactive state. When furnished with warmth and moisture, it begins to develop and multiply, but this process is slow.

Dried yeast has to be soaked in luke warm water and mixed with very soft dough for a preliminary period before the other ingredients are added. Activated Dried Yeast: This develops more rapidly than dried yeast and is the type that is most commonly used these days. It can be added straight into the flour. It is also less perishable than compressed yeast (see below). The shelf life of both dry and activated dry yeast is longer when stored in the refrigerator. Compressed Yeast: This is a moist mixture of yeast plants and starch. The yeast remains active and will grow and multiply rapidly when added to dough. It has to be kept refrigerated and will keep well only for a few days. If held in the freezer, it retains its activity for a longer period.

CHEMICAL LEAVENERS Chemical leaveners are those that release gases produced by chemical reactions. Baking Soda: is the chemical sodium bicarbonate. If moisture and acid are present soda releases carbon dioxide gas, which will leaven the product. Heat is not necessary for the reaction, although the gas will be released at a faster rate if the temperature is increased. For this reason, products leavened with soda must be baked immediately otherwise the gases will escape and the leavening power will be reduced. Acids that react with soda in a batter or dough would include honey, molasses, buttermilk, fruits, cocoa and chocolate. Sometimes, acids, such as cream of tartar are added to induce the production of carbon dioxide. Baking Powder: is a mixture of baking soda and an acid such as cream of tartar and diluted with corn flour to give a product of the desired strength. The corn flour also serves to separate the acid and the base, thereby increasing the stability of the mixture. General proportions used are 1 to 2 tps /500 GMS of the flour or foundation ingredients. Baking powders are more versatile since they do not depend on acids for their leavening power. Do not include more baking powder in a recipe, as it will create an undesirable flavor. Baking Ammonia: is the chemical ammonium carbonate. It decomposes during baking to form carbon dioxide gas and ammonia gas. Only heat and moisture are required for it to work. No acid is required for reaction to take place. Baking ammonia releases gases very quickly and can only be used in small products like cookies or in products like choux pastry where rapid leavening is desired. Because it decomposes quickly, it leaves no residue, which could affect the flavor. **MECHANICAL AGENTS** Air: is incorporated in a batter primarily by two methods. This air expands during baking and will leaven the product. 1. Creaming – is the process of beating fat and sugar together. Besides breaking up the fat into minute particles, it also incorporates air into the mixture. It is an important

3) List down types of flours giving examples of products made by each type of flour.

Flour is the principal raw material used in the manufacture of bread, cakes, cookies & pastries. It provides bulk & structure to these products. Flour indicates any foodstuff which is finely powdered e.g. rice flour, soya flour; corn flour etc. when there is no specific indication of the type of flour then it refers to refined wheat flour. Wheat grows in almost every part of the world, except in extreme climatic conditions.

TYPES OF FLOURS: Flours are not only derived from wheat but also from other grains and seeds, it is very important for chefs to have knowledge of such flours so they can make different products with the range of flours which are healthier.

TYPES OF FLOURS OBTAINED FROM VARIOUS GRAINS

1) RYE FLOUR

Rye flour does not have much gluten content as in popular flour and hence, it is sometimes mixed in proportions with flour for the production of breads. Breads which use only rye flour are more dense and chewy.

2) SPELT FLOUR

It is quite popular in European countries such as Germany, France and Swiss. It is a good source of vitamin B.

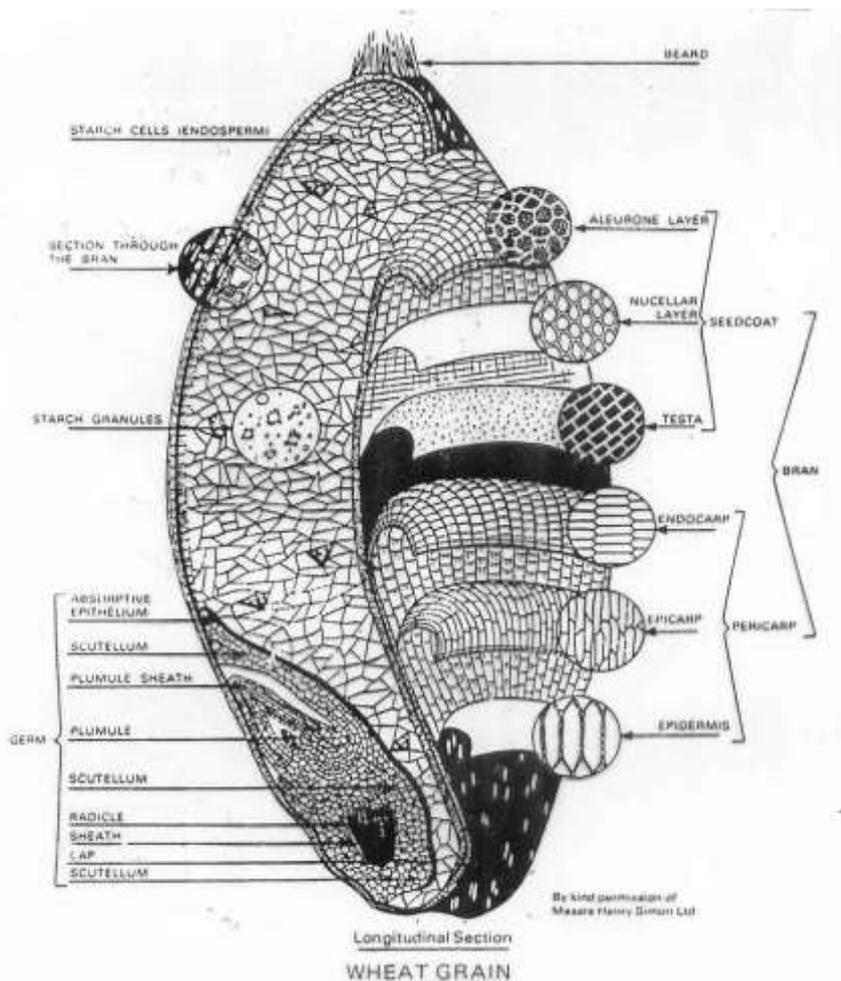
3) RICE FLOUR

It is finely ground polished rice with a similar texture of corn starch, usually used as a thickening agent.

4) MAIZE FLOUR

Popular in Mexico, this flour is made from cooked maize corn and then ground. It is also

4) Draw and label diagram of the wheat grain.



5) List down mother sauces and two derivatives of each.

A "sauce" may be defined as a flavourful liquid, usually thickened, which is used to season flavour, enhance other foods.

Mother or Leading sauces may be further divided into Hot, Warm and Cold sauces, depending upon the degree of heat used in their preparation.

Hot sauces : Béchamel, Veloute, Espagnole and Tomato sauce.

Warm sauces : Hollandaise/ Béarnaise (Emulsion sauce)

Cold sauces : Mayonnaise sauce (Emulsion sauce)

MOTHER SAUCES AND THEIR DERIVATIVES

Mother Sauces

<i>Béchamel sauce</i>	Milk (Infused) + White Roux + Seasonings*
<i>Veloute sauce</i>	White stock + Blond Roux + Seasonings*
<i>Espagnole sauce</i>	Brown stock + Brown Roux + Sachet seasonings*
<i>Tomato sauce</i>	Tomato + Stock + Little Roux (optional) + Sachet seasonings*
<i>Hollandaise sauce</i>	Clarified Butter + Egg yolks + Reduction of crushed peppercorns + Salt in vinegar and water + lime juice
<i>Béarnaise sauce</i>	Clarified Butter + Egg Yolks + Reduction of (chopped shallots , tarragon, chervil , white pepper) in white wine and tarragon vinegar + a pinch of Cayenne pepper + chopped tarragon and chervil
<i>Mayonnaise sauce</i>	Olive / Salad Oil + Eggs Yolks + salt + Pepper powder + Mustard + vinegar + Lime juice + sugar (optional)

*Comprises of Onion, Bay leaf Pepper corn, Cloves, Mace and Thyme.

Derivatives of Béchamel Sauce

<i>Mornay Sauce</i>	Béchamel + Grated Parmesan and Grated Gruyere cheese.
<i>Cream sauce</i>	Béchamel + heavy cream.
<i>Mustard sauce</i>	Béchamel +prepared mustard.
<i>Soubise sauce</i>	Béchamel + Sautéed diced onions.
<i>Nantua sauce</i>	Béchamel + Cray fish tails +Cray fish butter + cream.
<i>Scotch egg sauce</i>	Béchamel +Hard boiled eggs (dices of egg whites and sieved yolks).
<i>Lobster sauce</i>	Béchamel +anchovy essence + diced cooked lobster flesh +a little cayenne pepper.
<i>Cardinal Sauce</i>	Béchamel + a reduction of fish stock and truffle essence + very red Lobster butter+ cayenne pepper.
<i>Horseradish sauce</i>	Béchamel + little beef stock + grated horseradish + vinegar + cayenne pepper.

Avignon
(avignonnaise)

Cream sauce flavoured with garlic + Grated Parmesan +Egg yolks +chopped parsley.

Derivatives of Veloute Sauce

<i>Supreme Sauce</i>	Veloute +Cream.
<i>Allemande Sauce</i>	Veloute +Mushroom liquor + egg yolks +grated nutmeg+ lemon juice. (<i>This sauce is also known as Sauce Parisienne a name which is more logical and proper than Sauce Allemande</i>).
<i>Normande Sauce</i>	Fish Veloute +mushroom liquor +Mussels liquor +fish stock + liaison (egg yolks + cream) + lemon juice.
<i>Mushroom Sauce</i>	Sauce Allemande+ mushrooms (to serve with poultry. To serve with fish – Fish Veloute + mushrooms + liaison is used instead of sauce allemande.
<i>Sauce Albufera</i>	Sauce supreme + meat glaze + pimento butter.
<i>Sauce Aurore</i>	Veloute + tomato puree + butter.
<i>Sauce Bercy</i>	Fish Veloute+ chopped shallots sweated in butter + white wine + chopped parsley (<i>special for fish</i>).
<i>Sauce Bonnefoy (White Bordelaise Sauce)</i>	Make a white wine reduction with chopped shallots, ground pepper, bay leaf and thyme to this add ordinary Veloute and finish the sauce with a little chopped tarragon.
<i>Oyster Sauce (Sauce Huitres)</i>	Normande sauce + poached oysters.
<i>Sauce Hongroise</i>	Veloute + sautéed onions + paprika + butter.
<i>Sauce Indienne (Curry Sauce)</i>	Veloute+ Curry powder + Coconut milk + cream+ lemon juice.
<i>Sauce Ivoirie</i>	Sauce Supreme + Meat glaze.
<i>Sauce Joinville</i>	Sauce Normande finished with Cray fish and Shrimp butter instead cream and butter.
<i>Sauce Diplomate</i>	Sauce Normande + Lobster butter + dices of cooked lobster+ dices of truffle.
<i>Sauce Saint-Malo</i>	Reduction of white wine + chopped shallots + anchovy essence + mustard.
<i>Sauce Riche</i>	Sauce Diplomate + Truffle cut into small dices + truffle essence.
<i>Sauce Chivry</i>	Reduction of white wine with Chervil, parsley, tarragon, chopped shallots and chives + Veloute + butter.
<i>Sauce Regence for Fish</i>	Sauce Normande + Reduction of Rhine wine with mushroom and truffle trimmings+ truffle essence.
<i>Sauce Regence</i>	Same reduction as above + Sauce Allemande + truffle essence.

for Poultry

Sauce Villeroy Sauce Allemande + Ham + Truffle essence. This sauce is used to coat certain food items and then they are Egg and Bread crumbed and deep fried.

Derivatives of Espagnole Sauce

Estouffade means brown stock

Espagnole means brown sauce.

Concentrated brown stock is called **Meat glaze**.

Equal quantities of Estouffade and Espagnole reduced to half is called **Demi-glaze**.

<i>Sauce Bigarade</i>	(For Braised duck) Espagnole + D.G. (Demi glaze) + orange juice + Orange zest + Lemon juice + Lemon zest.
<i>Sauce Bordelaise</i>	Reduction of (red wine + shallots + peppercorns + bay leaf+ thyme) + Espagnole + Meat glaze (M.G.) + Lemon + dices of poached bone marrow (served with grilled red meat).
<i>Sauce Bourguignonne</i>	Reduction of (red wine + shallots + parsley + bay leaf+ thyme + mushroom) + Butter (Beurre Manie) + Cayenne Pepper (served with Eggs and dishes a la Bourguignonne).
<i>Sauce Robert</i>	Reduction of finely chopped sautéed onions + white wine + Demi Glace + Sugar + English Mustard (served with grilled pork).
<i>Sauce Charcutiere</i>	Sauce Robert + Juliennes of Gherkins. Served with grilled pork chops and any grilled meats.
<i>Sauce Chasseur</i>	Reduction of (white wine + slices of mushroom + finely chopped shallots) + D.G. + Tomato sauce + Butter+ Chopped Tarragon and Chervil.
<i>Sauce Chasseur (Escoffier's method)</i>	Meat Glaze + Demi Glace + (White wine + Brandy + Mushrooms + Shallots) reduction + Tomato sauce + Parsley.
<i>Sauce Colbert</i>	Sauce Colbert is actually Colbert Butter which is Maitre d'Hotel butter with the addition of meat glaze. I.e. Butter + Chopped Parsley + Lemon juice + salt.
<i>Sauce Diable (Devilled Sauce)</i>	Reduction of white wine and chopped shallots + Demi Glace + strongly seasoned with Cayenne pepper. Served with grilled drilled chicken and pigeons.
<i>Escoffier's Devilled sauce</i>	It is commercially obtainable add equal amount of softened butter to the sauce before use. Serve with grilled or poached fish and for all grilled foods.
<i>Sauce Poivrade</i>	Espagnole + freshly crushed peppercorns + butter. This sauce is served with butcher's meat.

<i>Sauce Diane</i>	Sauce Poivrade + whipped cream + crescent shaped pieces of truffle and hard boiled whites of eggs.
<i>Sauce Italienne</i>	Demi Glace + mushrooms + shallots + ham + chopped tarragon + chervil + parsley. Used in the preparation of many small entrées.
<i>Sauce Lyonnaise</i>	Reduction of chopped golden brown onions in white wine and vinegar + demiglace.
<i>Sauce Mader</i> <i>(Madeira Sauce)</i>	Reduction of Demi Glace until slightly thickened + Madeira wine to correct consistency.
<i>Sauce Perigueux</i>	Demi Glace + Truffle essence + Chopped Truffle.
<i>Sauce Piquante</i>	Reduction of (white wine + vinegar + shallots) + Espagnole + chopped Gherkins + tarragon + chervil + parsley. Usually served with grilled, roast or boiled pork or even with boiled beef.
<i>Sauce Zingara</i>	Demi Glace + reduction of white wine and mushroom liquor + mushrooms+ Cayenne pepper + julienne of cooked ham + salted ox tongue + truffle.
<i>Africaine</i>	Demi glace + Cayenne pepper + Madeira garnished with onion rings + diced truffles.
<i>Sauce Bercy</i>	Meat glaze + butter + reduction of shallots and peppercorns in white wine garnished with dices of marrow + chopped parsley (served with grilled meats).

Derivatives of Tomato Sauce

<i>Sauce Portugaise</i>	Tomato sauce + meat glaze + chopped onions + concassed tomatoes + garlic + salt + sugar + chopped parsley.
<i>Sauce Creole</i>	Tomato Sauce + reduction of (white wine + garlic + onion) + Cayenne pepper + strip of red peppers.
<i>Sauce Provencale</i>	Dices tomatoes sautéed in oil chopped parsley + garlic + salt + pepper + sugar.
<i>Sauce Navarraise</i>	Tomato Sauce + flavoured with garlic + garnished with chopped herbs.
<i>Sauce Milanaise</i>	Tomato puree + M.G. + D.G. + garlic + mushroom juliennes sautéed in butter.
<i>Algerian</i>	Tomato sauce garnished with strips of green or red pepper.

Derivatives of Hollandaise Sauce (Isigny Sauce or Dutch Sauce)

It is made with a reduction of crushed peppercorns in vinegar.

<i>Sauce Maltaise</i>	Hollandaise sauce + juice of two Blood Oranges + Grated zest of the same oranges. Served with asparagus.
<i>Sauce Mousseline</i> <i>(also called</i>	2/3 H. sauce + 1/3 Whipped Cream. Served with boiled fish and

<i>Sauce Chantilly</i>)	vegetables like asparagus celery, etc.
<i>Sauce Aegir</i>	Hollandaise Sauce+ Mustard powder.
<i>Sauce Ancienne</i>	Dutch sauce garnished with chopped Gherkins, mushrooms and truffles.
<i>Sauce Bavaroise</i>	Hollandaise Sauce + Cray fish butter + dices of Cray fish tails. Served with fish.
<i>Sauce Noisette</i>	Hollandaise Sauce + Hazelnut butter (Beurre de Noisette). Served with poached salmon and trout.
<i>Sauce Rubens</i>	Reduction of white wine, fish stock and fine mirepoix. Strain, add Egg yolks and finish with crayfish butter in the same way as with Hollandaise and anchovy sauce.

Derivatives of Béarnaise Sauce

<i>Béarnaise Sauce</i>	It can be considered as a derivative of hollandaise sauce.
<i>Sauce Arlesienne</i>	Béchalme + Tomato puree + anchovy paste + diced tomatoes.
<i>Sauce Paloise</i>	Béarnaise Sauce made with a reduction of mint, shallots, white pepper in white wine and vinegar served with grilled meats.
<i>Sauce Rachel</i>	Béchalme Sauce + Demiglace garnished with dices of tomatoes.
<i>Sauce Choron</i>	Béchalme Sauce + Tomato puree. Served with grilled meat and poultry.
<i>Sauce Foyot</i>	Béchalme Sauce + Meat glaze. Served with grilled butcher's meat.
<i>Sauce Valois</i>	Same as sauce Foyot.
<i>Sauce Tyrolienne</i>	Same reduction as for Béarnaise sauce + concentrated tomato purees + egg yolks and whisk over gentle heat and add oil (instead of clarified butter.) Correct seasoning and add a little Cayenne pepper. This sauce is suitable for serving with grilled meats and fish. (Choron sauce with oil instead of butter).
<i>Sauce Veron</i>	Three parts of Normande sauce + one part of Tyrolienne sauce, finished with pale meat glaze and anchovy essence.
<i>Sauce Francaise</i>	Béarnaise Sauce blended with fish glaze and tomato puree.

Derivatives of Mayonnaise Sauce

<i>Sauce Alexandra (cold)</i>	Mayonnaise prepared with sieved yolks of hard boiled eggs + English Mustard + chopped chervil.
<i>Sauce American</i>	Mayonnaise Sauce+ lobster puree + mustard.
<i>Sauce Andalouse</i>	Mayonnaise Sauce + tomato puree garnished with dices of sweet peppers.
<i>Sauce Gribiche</i>	Mayonnaise Sauce made with cooked sieved hard- boiled eggs + chopped capers + gherkins + parsley + tarragon + chervil + white

	of hard boiled eggs cut into juliennes. Served with cold fish.
<i>Sauce Italienne</i>	Mayonnaise Sauce + poached sieved calf's brain + lemon + salt + pepper + chopped parsley. Served with cold meats.
<i>Sauce Remoulade</i>	Mayonnaise Sauce + Mustard + chopped gherkins + capers + chopped parsley + tarragon + chervil + anchovy essence. Served with various cold items/food.
<i>Sauce Tartare</i>	Mayonnaise Sauce with hard boiled eggs garnished with finely chopped onions and chives.
<i>Sauce Chantilly</i>	2 parts of mayonnaise sauce + 1 part of whipped cream + lime juice
<i>Gloucester Sauce</i>	Mayonnaise Sauce + Derby Sauce + sour cream + lemon juice + chopped fennel. This sauce is mainly served with cold meat.

Mayonnaise sauce is widely used as a salad dressing. In salads, mayonnaise sauce is mixed with various other ingredients and seasonings to prepare dressings like thousand island, cocktail, blue cheese, etc.

Miscellaneous Sauces

<i>Albert Sauce</i>	Butter sauce + simmered grated horseradish + cream + bread crumbs + egg yolks+ salt + pepper + mustard + vinegar. This sauce is suitable for joints of braised beef especially the fillet.
<i>Apple Sauce</i>	Cooked and well mashed apples + cinnamon + sugar. Served Luke warm, serve with roast duck, goose and pork.
<i>Aromatic Sauce</i>	White Bouillon made with thyme, basil, savory, marjoram, sage, chives, shallots, nutmeg and peppercorns thickened with blond roux + lime juice garnished with chopped and blanched tarragon and chervil. This sauce is suitable for serving with relevés of boiled or poached large fish or joints of butcher's meats.
<i>Bread Sauce</i>	Infused milk + Fresh white bread crumbs + salt + butter + cream. Served with roast poultry and roast game birds.
<i>Caper sauce</i>	Butter sauce + capers. Served with boiled fish and is an indispensable accompaniment for boiled leg of mutton.
<i>Celery Sauce</i>	Cream sauce + celery puree. Served with roast turkey.
<i>Cranberry Sauce</i>	Stewed cranberries puree + sugar. Served with roast turkey.
<i>Fennel Sauce</i>	Butter sauce flavoured with blanched fennel. This sauce is served with grilled or boiled mackerel.
<i>Parsley Sauce</i>	Butter sauce + chopped and blanched parsley. This sauce is served with calf's head, feet and brains, etc.
<i>Cambridge Sauce</i>	Mayonnaise made with hard boiled eggs, fillets of anchovy, capers, tarragon, chervil, and chives + mustard + Cayenne pepper + vinegar + chopped parsley. Served with any kind of cold meat.

<i>Cumberland Sauce</i>	Red currant jelly + Port wine + Chopped shallots + orange and lemon juices and zests + mustard + Cayenne pepper + ground ginger. Mix all the ingredients together well. This sauce is served with cold venison.
<i>Horseradish Sauce</i>	Grated horseradish + mustard + castor sugar + sugar + cream + vinegar + soaked and squeezed bread crumbs. Served with roast and boiled beef.
<i>Mint Sauce</i>	Mint leaves chopped + castor sugar + vinegar + salt + pepper + water. Mix all the ingredients together. This sauce is served with hot or cold roast lamb.

Compound Butters (**Beurres Composes**)

<i>Ail (Garlic Butter)</i>	Garlic paste + Butter. Pass through a sieve.
<i>Amande (Almond)</i>	Almond paste + Butter sieved.
<i>Anchois (Anchovy)</i>	Anchovy puree + Butter sieved.
<i>Bercy</i>	Reduction of wine (White wine with chopped shallots, bone marrow, parsley, salt, black pepper, lemon juice) + butter + cream.
<i>Caviar</i>	Puree of caviar + butter.
<i>Chivery or Ravigote butter</i>	Parsley, Shallots, Tarragon, Fresh Pimpernel and Chives, Blanched and Pounded in a mortar with butter and sieved.
<i>Colbert Butter</i>	Maitre d' hotel butter mixed with meat glaze and chopped tarragon.
<i>Crevettes (shrimps)</i>	Shrimps pounded with butter and sieved.
<i>Ecrevisses (Cray Fish)</i>	Carcass of Cray fishes pounded with butter and sieved.
<i>Escargots (Snails)</i>	Chopped Shallots, Crushed garlic, and chopped parsley, salt, pepper mixed with butter and brandy.
<i>Estragon (Tarragon)</i>	Tarragon leaves Blanched and pounded with butter and sieved.
<i>Hareng (Herring)</i>	Fillets of smoked herrings pounded with butter and sieved.
<i>Homard (Lobster)</i>	Creamy parts eggs and coral of lobster pounded with butter and sieved.
<i>Maitre d' Hotel Butter</i>	Butter softened to a cream mixed with chopped parsley, salt, black pepper and lemon juice.
<i>Manie</i>	Butter in cream mixed with flour.
<i>Meuniere</i>	Nut brown cooked butter mixed with lemon juice and chopped parsley.
<i>Moutarde (Mustard)</i>	Creamy butter mixed with French mustard.
<i>Noir (Black)</i>	Cook butter until black. Strain and add vinegar.

<i>Noisette (Nut Brown)</i>	Cook the butter until a nice light brown colour.
<i>Paprika</i>	Chopped onions and Paprika, Tossed in butter and mixed with creamy butter and sieved.
<i>Pimentos</i>	Pound the Pimentoes with butter and sieve.
<i>Printanier</i>	Butter made with new vegetables such as carrots, French beans, peas etc.
<i>Raifort(Horseradish)</i>	Scraped horseradish pounded with butter and passed through a sieve.
<i>Tomato</i>	Tomatoes pounded with butter passed through a sieve.
<i>Truffes</i>	Truffles pounded with butter and béchamel sauce, passed through a sieve.

Dessert Sauces (Sweet Sauces)

<i>Apricot Sauce</i>	Cook apricots (dry or fresh) in very little water. Passed through a sieve boiled up with thickened syrup, flavoured with vanilla and strained.
<i>Brandy Sauce</i>	Syrup thickened with arrowroot and flavoured with brandy or English sauce flavoured with brandy.
<i>Caramel Sauce</i>	English sauce with caramel or thickened syrup mixed with caramel, boiled up with little cream and butter.
<i>Cherry Sauce</i>	Cherries cooked. Passed through a sieve mixed with reduced syrup and the same amount of red current jelly, flavoured with kirsch.
<i>Chocolate</i>	Chocolate dissolved with water, a little vanilla and sugar and cooked finished off before serving with butter and cream.
<i>English sauce</i> <i>Crème or sauce à l'Anglaise</i>	Custard made of powdered sugar stirred with egg yolks cooked in double boiler or beaten in water bath with reduced milk flavoured with vanilla or lemon zest and thickened and strained . Used hot or cold.
<i>Hard sauce</i>	Butter creamed with sugar a little cream added flavored generously with Brandy. Hard sauce is served chiefly for plum or similar puddings.
<i>Orange sauce</i>	Strained orange marmalade mixed with orange syrup flavoured with curacao
<i>Praline</i>	English sauce mixed with very finely ground praline and a little vanilla sugar.
<i>Raspberry Sauce</i>	Prepared like cherry or strawberry sauce.
<i>Redcurrent</i>	Dissolved red current jelly mixed with a little syrup thickened very lightly with arrowroot flavoured with kirsch.
<i>Richelieu</i>	Vanilla syrup thickened with arrowroot flavoured with kirsch mixed with juliennes of cherries.

<i>Strawberry sauce</i>	Strawberry jam rubbed through a sieve mixed with syrup flavoured with kirsch.
<i>Syrup</i>	Simple syrup in ordinary sugar boiled with water to about 15 -18 degrees on a saccharometer. For desserts it is slightly thicked with arrowroot or corn starch boiled and strained mixed with pure fruit juice or flavoured spirits or liqueurs.
<i>Vanilla</i>	Same as English sauce flavoured with vanilla.

6) List and explain any 5 methods of making cookies

COOKIES (METHODS OF PREPARATION) & TYPES MIXING METHODS Cookie mixing methods are very much like cake mixing methods. The major difference is that less liquid is usually incorporated, so that mixing is somewhat easier. Less liquid means that the mixing will less develop gluten. Also it is a little easier to get a smooth uniform mix. There are basic three cookie mixing methods: One - stage Creaming Sponge These methods are subject to many variations due to differences in formulas. The general procedures are as follows, but always are sure to follow the exact instructions with each formula. One - stage method: This method is the counter part of the two-stage cake mixing method. There is more liquid in cake batters so it must be added in two or more stages in order to blend uniformly. Low moisture cookies on the other hand can be mixed all in one stage. Because all the ingredients are mixed at once, the baker has less control over the mixing with this method than with the other methods. Therefore, this method is not frequently used. When over mixing is not a great problem, as with some chewy cookies, it can be used. Procedure for one state method 1. Scale ingredients accurately. Have all ingredients at room temperature. 2. Place all ingredients in mixer. With the paddle attachment, mix these ingredients at low speed until uniformly blended. Scrape down the sides of the bowl as necessary. Creaming method This is nearly identical to the creaming method for cakes. Since cookies require less liquid, it is not necessary to add the liquid alternately with the flour. It can be added all at once. Note the importance of step two, the creaming stage. The amount of creaming affects the texture of the cookie, the leavening and the spread. Only a small amount of creaming is desired when the cookie must retain its shape and not spread too much Also if the cookie is very short (high in fat and low in gluten development) or if it is thin and delicate too much creaming will make the cookie too crumbly. Procedure for creaming method: 1. Scale ingredients accurately. Have all ingredients at room temperature 2. Place the fat, sugar, salt and spices in the mixing bowl. With paddle attachment, cream these ingredients at a low speed. For light cookies cream until the mix is light and fluffy, in order to incorporate more air for leavening. For denser cookies, blend to a smooth paste, but do not cream until light. 3. Add eggs, liquid and blend in at low speed. 4. Sift in the flour and leavening. Mix until just combined. Do not over mix, or gluten will develop?

Sponge method This method is similar to the egg foam methods for cakes. The procedure varies considerably depending on the ingredients. Batches should be kept small because the batter is delicate. Procedure for sponge method 1. Scale all ingredients accurately. Have all ingredients at room temperature, or warm the eggs slightly for greater volume, as for sponge cakes. 2. Following the procedure given in the formula used, whip the eggs (whole, yolks or whites) and the sugar to the proper stage soft peaks for whites, thick and light for whole eggs or yolks. 3. Fold in the remaining ingredients as specified in the recipe. Be careful not to over mix or to deflate the eggs. **TYPES AND MAKEUP METHODS** We can classify cookie type by their makeup methods. Grouping them by the makeup method is perhaps more useful from the point of view of production, because their mixing methods are relatively

simple, while their makeup procedures vary considerably. Bagged, Dropped, Rolled, Moulded, Icebox, Bar, Sheet. No matter what makeup method you use follow one important rule, make all the cookies of uniform size and thickness. This is essential for even baking since baking time are so short, small cookies may burn before large ones are done. If the tops of the cookies are to be garnished with fruits, nuts, or other items, place the garnishes on the cookies as soon as they are panned press them on gently. If you wait until the surface of the dough begin to dry, the garnish may not stick and will fall off after baking. **BAGGED** Cookies Bagged or pressed cookies are made from soft dough's. The dough must be soft enough to be forced through a pastry bag, but stiff enough to hold its shape. 1. Fit a pastry bag with a tip of the desired size and shape. Fill the bag with the cookie dough. 2. Press out cookies of the desired shape and size directly onto prepared cookie sheet. Eg:- Vanilla swirls

DROPPED Cookies Like bagged cookies Dropped cookies are made from soft dough. Actually, this method can consider the same as the bagged method, and many bakers use the term "Drop" for both bagging cookies and for depositing dough with a spoon or scoop. Usually a pastry bag is faster, and it gives better control over the shape and size of the cookies. However, in the following situations, using a scoop to drop cookies may be preferred. E.g.: - Chocolate chip cookies When the dough contains pieces of fruits, nuts or chocolate that would clog the pasty tube. When you want the cookies to have a rough homemade look. 1. Select the proper size scoop for accurate portioning. 2. Drop the cookies onto prepared baking sheets. Allow enough space between cookies for spreading. 3. Rich cookies will spread by themselves. But if the formula requires it, flatten the mounds of batter slightly with a weight dipped in sugar.

ROLLED Cookie Cookie rolled and cut from stiff dough are not made as often in bakeshops and food service operations as they are made in homes because they require excessive labour. Also there are always scraps left over after cutting. When rerolled, these scraps make inferior, tough cookies. The advantage of this method is that it allows you to make cookies in a great variety of shapes for different occasions. 1. Chilled dough thoroughly.

2. Roll dough out 1/8 inch (3mm) thick on a floured canvas. Use as little flour as possible for dusting, since this flour can toughen the cookies. 3. Cut out cookies with cookie cutters. Place cookies on prepared baking sheets. Cut as close together as possible to reduce the quantity of scraps. Roll scraps into fresh dough to minimize toughness 4. Baked cut-out cookies are often decorated with coloured icing (royal icing or fondant) for holidays or special occasions. E.g.: - Crispy cheese biscuit

MOLDED Cookies The first part of this procedure (step I & 2) is simply a first and fairly accurate way of dividing the dough into equal portions. Each piece is they moulded into the desired shape. This usually consists of simply flattening the pieces out with a weight. For some traditional cookies, special moulds are used to flatten the dough and at the same time stamp a design into the cookie. The pieces may also be shaped by hand into crescents, fingers

or other shapes. 1. Refrigerate the dough if it is too soft to handle. Roll it out into long cylinders about one-inch-thick, or whatever the size is required. 2. With a knife or bench scraper, cut the roll into ½ ounce (15gm) pieces, or whatever size is required. 3. Place the pieces on a prepared baking sheet, leaving 2 inches space between each. 4. Flatten the cookie with a weight, such as a can, dipped in granulated sugar before pressing each cookie. A fork is sometimes used for flattening the dough for peanut butter cookies. 5. Alternative method: After step 2 shape the dough by hand into desired shapes. Eg:- Nankhatai

ICEBOX Cookies The icebox or refrigerator method is ideal for operations that wish to have freshly baked cookies on hand at all times. The rolls of dough must be made in advance and stored. Cookies can easily be cut and baked as needed. This method is also used to make multicolored cookies in various designs, such as checkerboard and pinwheel cookies. 1. Scale the dough into pieces of uniform size from 1 ½ lb (700gm) if you are making small cookies to 3lb (1400gm) for large cookies.' 2. . Form the dough into cylinders from 1 -2 inches in diameter, depending on the size. For accurate portioning, it is important to make all the cylinders of dough the same thickness and length. 3. Wrap the cylinders in parchment or wax papers, place them on sheet pans, and refrigerate overnight. 4. Unwrap the dough and cut into slices of uniform thickness. The exact thickness required depends upon the size of the cookie and how much the dough spread during baking. The usual range is from 3 - 6 mm. A slice machine is recommended for ensuring even thickness. Dough's containing nuts or fruits however should be sliced by hand with a knife. 5. Place the slice on prepared baking sheet, allowing 5cm between cookies. E.g.: - Date pinwheel cookies

3. Flatten the dough with the fingers into strips about 3 - 4 inches wide and about ¼ inch thick. 4. If required brush with egg wash. 5. Bake as directed in the formula. 6. After baking while cookies are still warm cut each strip into bars about 4 ½ cm wide.

SHEET Cookies Sheet cookies vary so much that it is nearly impossible to give a single procedure for all of them. Some of them are also like sheet cakes; only denser and richer they may even be iced like sheet cakes. Other consists of two or three layers added and baked in separate stages. The following procedure is only a general guide: 1. Spread cookie mixture into prepared sheets pans. Make sure the thickness is even. 2. If required add topping or brush with an egg wash. 3. Bake as directed. Cool 4. Cut into individual squares or rectangles. E.g.: - Hermit spiced cookies Various cookies can be sandwiched with an array of fillings like jam, butter icings, marshmallow etc.

BAR Cookies This procedure is called the Bar method because the dough is baked on long, narrow strips, which are then cut crosswise into bars. It should not be confused with sheet cookies, which are sometimes called bars by home cooks. 1. Scale the dough into 800gms units, 450 Gms units may be used for-smaller cookies. 2. Shape the pieces of dough into cylinders the length of the sheet pans. Place three strips on each greased pan, spacing them well apart.

Q5. Answer ANY THREE of the following:

1) List 5 hazards that can take place in a professional kitchen.

Kitchen work is usually considered a relatively safe occupation, at least in comparison with many industrial jobs. Nevertheless, the kitchen has many hazards. Minor injuries from cuts and burns are common, and more serious injuries are all too possible. The quantity of hot equipment and powerful machinery, combined with the busy, sometimes frantic pace, make it important for everyone to work carefully and with constant attention to the rules of safety. In the United States, the Occupational Safety and Health Administration (OSHA) established sets of rules governing workplace safety. Employers are required to follow these rules and guidelines. In Canada, information on comparable legislation, both national and provincial, is provided by the Canadian Centre for Occupational Health and Safety (CCOHS). THE SAFE WORKPLACE Most of this section is concerned with ways workers can prevent certain kinds of accidents, such as cuts, burns, and falls. However, it is much easier to develop and practice habits that prevent accidents if safety is built into the workplace. The management of a food service operation must see to it that the structure and equipment have necessary safety features. Structure, equipment, and electric wiring in good repair. Adequate lighting on work surfaces and in corridors. Non-slip floors . Clearly marked exits. Equipment supplied with necessary safety devices . Heat-activated fire extinguishers over cooking equipment, especially deep fryers. Conveniently located emergency equipment, such as fire extinguishers, fire blankets, and first-aid kits. Clearly posted emergency telephone numbers . Clearly posted emergency procedures, including the Heimlich maneuver for victims of choking. One or more employees should have received formal training in this procedure. In addition, it is a good idea to train one or more employees in cardiopulmonary resuscitation (CPR). Smooth traffic patterns to avoid collisions between workers

- 1) Fire and Burns due negligence and inattentiveness.
- 2) Cuts and Spills.
- 3) Equipment malfunctions due to improper handling and poor maintenance.
- 4) Slips and falls
- 5) Accidents due to negligence of staff and no proper training.

2) Explain: i) Infusion ii) Roux iii) Crouton iv) Au gratin v) Batter

Infusion

The liquid extraction derived from steeping a substance such as coffee, tea, herbs, etc in boiling water/liquid.

Roux

A thickening for soups or sauces made with equal quantities of fat and flour cooked to different degrees.

Crouton

Bread cut in small dices or fancy shapes and fried or toasted. Used as a garnish for serving with soup.

Au gratin

Any dish covered with a sauce, breadcrumbs or cheese and afterwards baked or grilled. The food is served from the dish in which it is cooked.

Batter

A mixture of flour and liquid such as milk, egg, etc of such consistency that it can be beaten or stirred. Used to coat foods for frying or as pancakes etc. May be sweet or savoury.

3) List down 5 contemporary and 5 proprietary sauces.

Proprietary Sauces are as mentioned below

- 1) L.P. Sauce
- 2) Worcestershire Sauce
- 3) Tabasco sauce
- 4) 8 to 9 sauce
- 5) Oyster Sauce.

Contemporary Sauces are mentioned below

- 1) Béchamel
- 2) Veloute
- 3) Espagnole
- 5) Hollandaise
- 6) Mayonnaise

4) Give reason-

- a. **Vinegar is added to water while poaching egg.**
- b. **Dressings should be added to salads just before service.**

Vinegar is added to water while poaching eggs because the vinegar in form of an acid helps in coagulation of protein and helps cook the egg faster.

Dressings should be added to salads just before service as the dressing contains salt which is hygroscopic in nature and will make the salad soggy and spoil the texture of salad hence to keep the salads fresh and crisp dressings should always be added to the salad just before the service.

5) Give reason-

- a. **Green Leafy vegetables are not to be covered while cooking.**
- b. **Blue ring formation on overcooked eggs**

The green leafy vegetables are not to be covered while cooking because of the discolouration of the greens.

The grey ring formation on overcooking of egg is due the chemical reaction between the iron from the egg yolk and sulphur from the egg white which forms ferrous sulphide at the surface of the egg yolk.

6) List 5 solid and 5 liquid sugars.

SUGARS GRADING

Sugars may be graded into 2 groups.

SOLID SUGARS

SEMI-SOLID SUGARS

- | | |
|--------------------------|-----------------|
| 1) Granulated sugar | 1) Glucose |
| 2) Castor Sugar | 2) Golden Syrup |
| 3) Icing Sugar | 3) Honey |
| 4) Demerara/ Brown sugar | 4) Treacle |
| 5) Cube sugar | 5) Molasses |
| 6) Sugar Nibs | 6) Invert Sugar |
| | 7) Malt Syrup |