
UNIT 01: INTRODUCTION TO MODERN HOTEL KITCHEN

Structure

- 1.1 Objective
- 1.2 Introduction
- 1.3 The rationale behind kitchen organization
- 1.4 The Classical Kitchen Brigade
- 1.5 Modern Kitchen Organization
- 1.6 Sections of Kitchen
 - 1.6.1 Larder Section
 - 1.6.2 Sauce Section
 - 1.6.3 Roast Section
 - 1.6.5 Vegetable Section
 - 1.6.6 Soup Section
 - 1.6.7 Indian Section
 - 1.6.8 Pastry Section
- 1.7 Kitchen Layouts
 - 1.7.1 The single line (or Pullmann) kitchen
 - 1.7.2 The galley kitchen
 - 1.7.3 The L-shape kitchen
 - 1.7.4 The U-shape kitchen
 - 1.7.5 The island kitchen
 - 1.7.6 The G-Shaped Kitchen
- 1.8 Summary
- 1.9 Review Questions

1.1 Objective

After reading this unit learner will be able to understand the following:

- The rationale behind kitchen organization
- The Classical Kitchen Brigade
- Modern Kitchen Organization
- Sections of Kitchen
- Layout of Kitchen

1.2 Introduction

The organization of kitchens will vary, mainly due to the size and the type of the establishment. Obviously, where a kitchen has hundred Chefs preparing for banquets for up to 1000 people and a lunch and dinner service for 300-400 customers with a la carte menu, the organization will be quite different from a small restaurant doing thirty table d'hote lunches or a hospital diet kitchen preparing diets.

Even when there are two kitchens of a similar nature, the internal organization may vary as each Chef de Cuisine will have his own way of running his kitchen. It has been found most satisfactory in organizing the work of a kitchen to divide it into "Parties" or "Corners". The parties system was perfected by Escoffier and it

was the result of studying about the food production and the recipes allocating tasks to different specialists so as to help produce the more complex dishes regularly, efficiently and swiftly. The kitchen was divided into sections, each one of which was responsible for a particular contribution to the entire food production system.

In the kind of kitchen Escoffier organized, the parties system reached the height of complexity because the end-products had to be of the highest finish and yet be completed to order in rapid sequence for a substantial number of customers. A set pattern was made. Basically the principles of kitchen organization represent a standard practice though there are no set rules for deciding how many sections and how many staff a particular kitchen requires. Each catering establishment has different factors to be taken into consideration such as extent of menu, number of persons to be served and management policy.

A large kitchen, which caters for a large number, will have more sections than a smaller kitchen catering for lesser numbers. The number of staff in a section is determined by the amount of work to be done and importance of the contribution of the section to the menus and the skill of work. The base of different kitchen organizations is taken from the Traditional Kitchen Organization that was pioneered by Auguste Escoffier, the instigator of the *partie* or corner system. He had many sections such as grill, roast, vegetable, fish, sauce, soup, larder, *pâtisseries* etc. As everything was done manually it was necessary but now the sections have become fewer, because of labour-saving machines, convenience foods and combined catering equipment (microwave cum convection ovens, etc.), and the changing of public taste, which seeks simpler menus and meals.

Latest trends are that the kitchen organizations vary with almost every establishment. In former times there were specialized large staffs called brigades. The various sections were being clubbed together to suit the establishments. Many kitchens use fresh food, ready to cook and sometimes ready to serve. This speeds the preparation and cooking times. The kitchens have become smaller and cook more versatile. New establishments employ less cooks.

1.3 The Rationale of Kitchen Organization

The purpose of kitchen organization is to assign or allocate tasks so they can be done efficiently and properly and so all workers know what their responsibilities are. The way a kitchen is organized depends on following factors:

1. **The Menu:** The kinds of dishes to be produced obviously determine the jobs that must be done. The menu is, in fact, the basis of the entire operation.
2. **The Type of Establishment :** The major types of food-service establishments are as follows:
 - a. Hotels

- b. Institutional kitchens Schools Hospitals, nursing homes, and other health care institutions and executive dining rooms Airline catering Military food service institutions
 - c. Private clubs
 - d. Catering and banquet services
 - e. Fast-food restaurants
 - f. Carry-out or take-out food facilities, including supermarkets
 - g. Full-service restaurants
3. The size of the operation (the number of customers and the volume of food served)
 4. The physical facilities, including the equipment in use

1.4 The Classical Brigade

One of Escoffier's important achievements was the reorganization of the kitchen. This reorganization divided the kitchen into departments, or stations, based on the kinds of foods produced. A station chef was placed in charge of each department. In a small operation, the station chef might be the only worker in the department.

But in a large kitchen, each station chef might have several assistants. This system, with many variations, is still in use, especially in large hotels with traditional kinds of food service. The major positions are as follows:

- ✓ **The Chef** is the person in charge of the kitchen. In large establishments, this person has the title of executive chef. The executive chef is a manager who is responsible for all aspects of food production, including menu planning, purchasing, costing, planning work schedules, hiring, and training.
- ✓ If a food-service operation is large, with many departments (for example, a formal dining room, a casual dining room, and a catering department), or if it has several units in different locations, each kitchen may have a chef de cuisine. The chef de cuisine reports to the executive chef.
- ✓ **The Sous Chef** (soo shef) is directly in charge of production and works as the assistant to the executive chef or chef de cuisine. (The word sous are French for "under.") Because the executive chef's responsibilities may require a great deal of time in the office, the sous chef takes command of the actual production and the minute-by-minute supervision of the staff.
- ✓ **The Station Chefs, or Chefs de Partie**, are in charge of particular areas of production. The following are the most important station chefs.
- ✓ **The Sauce Chef, or Saucier** (so-see-ay), prepares sauces, stews, and hot hors d'oeuvres, and sautés foods to order. This is usually the highest position of all the stations.
- ✓ **The Fish Cook, or Poissonier** (pwah-so-nyay), prepares fish dishes. In some kitchens, this station is handled by the saucier.

- ✓ **The Vegetable Cook, or Entremetier** (awn-truh-met-yay), prepares vegetables, soups, starches, and eggs. Large kitchens may divide these duties among the vegetable cook, the fry cook, and the soup cook.
- ✓ **The Roast Cook, or Rôtisseur** (ro-tee-sur), prepares roasted and braised meats and their gravies and broils meats and other items to order. A large kitchen may have a separate broiler cook, or grillardin (gree-ar-dan), to handle the broiled items. The broiler cook may also prepare deep-fried meats and fish.
- ✓ **The Pantry Chef, or Garde Manger** (gard mawn-zhay), is responsible for cold foods, including salads and dressings, pâtés, cold hors d'oeuvres, and buffet items.
- ✓ **The Pastry Chef, or Pâtissier** (pa-tees-syay), prepares pastries and desserts.
- ✓ **The Relief Cook, swing cook, or Chef de Tournant** (toor-nawn), replaces other station heads.
- ✓ **The Expediter, or Aboyeur** (ah-bwa-yer), accepts orders from waiters and passes them on to the cooks on the line. The expediter also calls for orders to be finished and plated at the proper time and inspects each plate before passing it to the dining room staff. In many restaurants, this position is taken by the head chef or the sous chef.
- ✓ **Cooks and assistants** in each station or department help with the duties assigned to them. For example, the assistant vegetable cook may wash, peel, and trim vegetables. With experience, assistants may be promoted to station cooks and then to station chefs.

1.5 Modern Kitchen Organization

As you can see, only a large establishment needs a staff like the classical brigade just described. In fact, some large hotels have even larger staffs, with other positions such as separate day and night sous chefs, assistant chef, banquet chef, butcher, baker, and so on. Most modern operations, on the other hand, are smaller than this. The size of the classical brigade may be reduced simply by combining two or more positions where the workload allows it. For example, the second cook may combine the duties of the sauce cook, fish cook, soup cook, and vegetable cook. A typical medium-size operation may employ a chef, a second cook, a broiler cook, a pantry cook, and a few cooks' helpers.

A working chef is in charge of operations not large enough to have an executive chef. In addition to being in charge of the kitchen, the working chef also handles one of the production stations. For example, he or she may handle the sauté station, plate foods during service, and help on other stations when needed. Small kitchens may have only a chef, one or two cooks, and perhaps one or two assistants to handle simple jobs such as washing and peeling vegetables. Cooks who prepare or finish hot à la carte items during service in a restaurant may be

known as line cooks. Line cooks are said to be on the hot line, or simply on the line. In many small operations, the short-order cook is the backbone of the kitchen during service time. This cook may handle the broiler, deep fryer, griddle, sandwich production, and even some sautéed items. In other words, the short-order cook's responsibility is the preparation of foods that are quickly prepared to order. One special type of short-order cook is the breakfast cook. This worker is skilled at quickly and efficiently turning out egg dishes and other breakfast items to order. By contrast, establishments such as school cafeterias may do no cooking to order at all. Stations and assignments are based on the requirements of quantity preparation rather than cooking to order.

The team of cooks and their assistants under the partie system is commonly called the KITCHEN BRIGADE. Specialists head the parties and with their assistants help produce complex dishes with great speed and efficiency. All the heads of the parties come under the control of the Chef de Cuisine (Head) aided by one or more sous chefs. In small establishments, head of the larder or sauce section acts as Sous Chef.

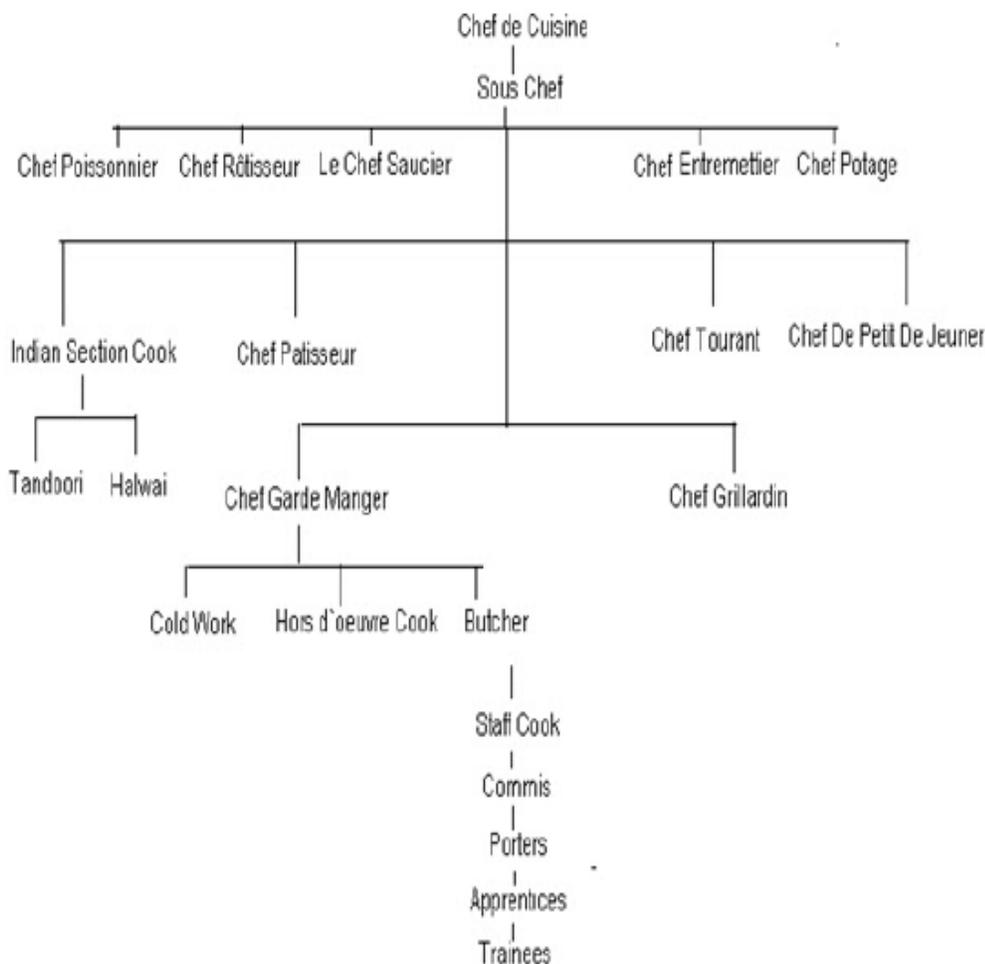


Figure 1.1 Kitchen organization Chart

1.6 Sections of Kitchen

Hotel kitchen is divided into various sections for fast and efficient functioning of department.

The various sections that may be found in hotel kitchen are as under:

- Larder Section
- Sauce Section
- Roast Section
- Vegetable Section
- Soup Section
- Indian Section
- Pastry Section

1.6.1 Larder Section

The word larder has in professional kitchens a much wider significance. The larder is not simply a place where food is stored but a place where the raw materials for cooking are prepared and dressed. In large establishments, the work is further broken into sections. The larder is a room set aside for the storage of perishable foods, both raw and cooked, where food as meat, fish, poultry and game are prepared and made ready for cooking. In this department too, all cold items found on the menu, such as hors d'oeuvres, cold dish or meat dishes, cold salads, etc. are prepared and dressed.

For these function to be effective, it is essential that:

1. The room should be separate from the kitchen situated in a cool place. At the same time, it must be close to the kitchen to avoid undue running about between the two departments which are closely interrelated.
2. It should be suitably lighted, well-ventilated and sufficiently open to allow the staff to perform their duties in a clean and efficient manner.
3. It must be equipped with the necessary fittings, plant, machinery and tools in accordance with the volume, and or quality of the trade of the catering establishment in which it is situated.

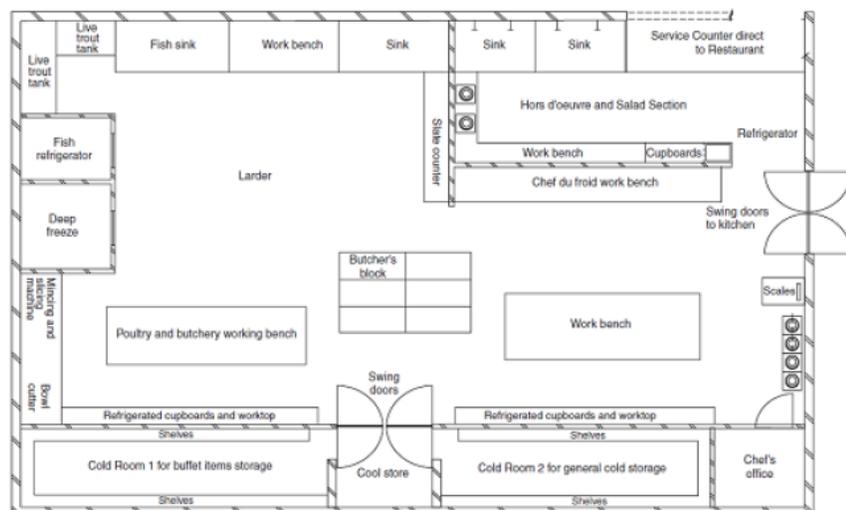


Figure 1.2 Layout of Larder Section

1.6.2 Sauce Section

The sauce section is responsible for providing all meat, poultry, game and offal dishes with the exception of those that are plain roasted or grilled. All the meat dishes are cooked and garnished. The partie will also provide all basic and finished sauces served hot, that are normally required by the various parties in the kitchen. Normally, one first commences early duty to cover the preparations and cooking of dishes as "Plat de Jour" as these often require a cooking time of 3-4 hours. Braising, boiling, peeling is also done in this section. Similar to the fish partie an extensive part of the dishes are cooked and a variety of cooked garnishes are also prepared. Mise-en-place for, banquets is also done here. The Chef Saucier does important work as he assembles dishes which have an impact on the customers.

1.6.3 Roast Section

The roast section is responsible for providing all roast dishes of meat, poultry and game. It is responsible for all grilled dishes of meat, chicken, offal and fish, and this duty is often delegated to the grill cook. The section is also responsible for the preparation of a number of dishes and the deep frying of the food items. It also prepares and finishes any savouries that are required.

1.6.4 Fish Section

This section is responsible for the provision of all fish dishes with the exception of those that are plain grilled or deep fried. The cleaning, descaling, filleting, crumbing is done by the fishmonger in larder. Generally as a larger selection of fish are offered, an extensive mise-en-place is required. At each service period, the following basic sauces are made ready for service: béchamel, white wine sauce, fish velouté, hollandaise and melted butter. Further, a number of garnishes are prepared in advance to a part cooked stage. By this arrangement, a variety of fish dishes particularly the poached and meuniere types can be done. Grilling is done by the grill cook or commis.

1.6.5 Vegetable Section

An entremet course in France was the responsibility of the entremet of vegetables, who skilfully prepared and cooked vegetables, which could be served as a separate course. An entremet was originally something sent to the table between the courses in France. During the period before service, each day various quantities of vegetables are prepared, cooked, refreshed and placed into refrigerator. Peeling, cleaning and trimming are done by semi-skilled workers. Limited quantities of certain potato dishes are cooked and finished to varying degrees, kept ready when service begins. Vegetable garnishes are prepared here and given to other sections. The cooking of eggs forms an important part of the work in this section particularly, omelettes of various types, e.g. plain, garnished, stuffed and flat round omelettes. Italian pastas but not noodles are also prepared in this section. Items like spaghetti, macaroni and rice may be sent to other sections for garnishes. The mise-en-place is carried out according to menu requirements. By this method, the vegetable cook and senior commis are able to cope with the finishing and serving of a vast amount of different dishes. Management of cooking vegetables well for large numbers calls for particular

knowledge, skill and judgment and should never be entrusted to an unskilled and disinterested cook.

1.6.6 Soup Section

It is the responsibility of this section to prepare soups such as consommés, creams, velouté, purees, broths, bisques and many special international soups. All basic stocks are also prepared here. The cold soups are prepared and passed to the larder for service. The garnishes come from the larder and vegetable section.

1.6.7 Indian Section

This section is responsible for the preparation, of all Indian dishes. The work is subdivided into subsections such as: Indian (bread and rice, pulaos, biryanis, chappaties, puries, bhaturas, etc.), vegetables, (bhajees, curries), meat, (including eggs and fish), tandoor (seekh kababs, tandoor chicken, boti kababs), Indian sweets jalebis, rasgullas, rabri, etc.) Each day a variety of dishes are prepared according to menu requirements.

1.6.8 Pastry Section

The work of this section is normally separated from the main kitchen and is self-contained in the matter of cold storage. The function of this section is to prepare hot and cold sweets, for lunches, dinners and pastries for tea-time and other occasions. It also prepares pastes like short and puff pastry, frying batters for making noodles for supply to other corners of the kitchen. Sorbets and water-ice like items are made in pastry section. The service of ices and those sweets which are based upon ice-cream are prepared and assembled in Patisserie. They also include the sweet omelettes au surprise and soufflé surprise, Melbas, etc. The art of pastry includes work like colored sugars to make flower baskets and similar decorative centre pieces, work with fondant and icing sugar, gum pastes, fashioning of praline into decorative objects. Where hotels operate a bakery section, the responsibility is carried out by the master baker. Normally one commis will commence early duty each day to provide the mise-en-place required by the various sections. The section needs workers with skill, imagination and experience.

1.7 Kitchen Layouts

If you understand the basic principles of kitchen layout will help take much of the mystery out of the design process. The most basic layout principle is the work triangle. The work triangle is the line drawn from each of the three primary work stations in the kitchen - the food storage, cooktop, and sink. By drawing these lines, you can see the distance you'll walk to move to and from each area.

5. Counter space on either side of the range or cook-top should be a minimum of 15 inches
6. An 18-inch counter should be adjacent to the fridge on the same side as the handle
7. The food prep area (minimum counter space 36 inches) is ideally located between the fridge and the sink; If the food prep area is between the sink and the range or cook-top, it will involve more travel.
8. A lower surface is best for food prep (measure 7 to 8 inches below your elbow height)
9. In two-cook kitchens, the fridge and range/cook-top are usually shared.
10. Two triangles can share a leg, but shouldn't overlap
11. An island with a second sink creates at least one more triangle, and adapts too many uses: wet bar location, flower cutting and arranging, homework station etc.

1.7.1 The Single Line (Or Pullman) Kitchen

This is a smart and simple solution for narrow rooms, ideally with one wall over 10 feet long, without windows or doors. However, this layout causes the longest journey distances since you often have to walk from one end of the room to the other. Therefore, it's a good idea to place the sink in the middle of the line, with adequate space separating it from the range:

1. Ideal for apartments and smaller homes
2. Works well with the open designs found in many contemporary homes
3. Small moveable table can provide eating space
4. Can be enhanced with the addition of an island

1.7.2 The Galley Kitchen

This shape offers the most efficient use of space, making it the choice of many professional chefs. The two rows allow room for lots of preparation space, and moving between activity areas can be as easy as turning around. However, this shape is not ideal if the corridor is open at both ends, since it can cause traffic congestion.

Make sure there is enough room for opposite drawers to be open at the same time (at least 48"). Another important consideration is to keep the cleaning and cooking areas on the same side in order to minimize the risk of accidents while moving hot pans between the sink and range.

1. Great for smaller kitchens
2. Appliances are close to one another
3. Easy for one cook to maneuver
4. Can easily convert to a U-Shape by closing off one end

1.7.3 The L-Shape Kitchen

This is a very popular kitchen layout - ideal for a family kitchen, or for entertaining guests, since it can easily accommodate table and chairs in the same room. Using two adjacent walls, the kitchen also benefits from the lack of through traffic. The sink, range and fridge should be separated by a preparation area.

1. Very flexible layout design

2. Major appliances can be placed in a variety of areas
3. Work areas are close to each other
4. Can easily convert to a U-Shape with a cabinet leg addition

1.7.4 The U-Shape Kitchen

The use of three full walls in a room offers the perfect working kitchen. The fridge, range and sink can be spaced out for maximum efficiency and convenience. This is great news for those who take your cooking seriously, as it provides the best workflows with the shortest distances around the kitchen. This shape also allows for large amounts of countertop and storage space.

1. Perfect for families who use their kitchens a great deal
2. Provides plenty of counter space
3. Efficient work triangle
4. Can convert one cabinet leg into a breakfast bar

1.7.5 The Island Kitchen

A very popular kitchen type, the island layout is perfect if you plan to entertain but requires more floor space. An independent island unit can face a dining or living area, allowing the cook to socialise while preparing. A sink here provides the optimal arrangement in terms of the kitchen's working triangle. Otherwise, a cook-top with a canopy over the island can form a stunning focal point to the kitchen.

1.7.6 The G-Shaped Kitchen

Built very much like the U-Shaped with the addition of an elongated partial wall, the G-Shaped kitchen offers a great deal of space.

1. Ideal for larger families needing extra storage space
2. Plenty of counter and cabinet space
3. Multiple cooks can function well in this layout
4. Can convert one cabinet leg into a breakfast bar or entertaining area

1.8 Summary

Traditional Kitchen Organization that was pioneered by Auguste Escoffier, the instigator of the *partie* or corner system. He had many sections such as grill, roast, vegetable, fish, sauce, soup, larder, *patisseur* etc. As everything was done manually it was necessary but now the sections have become fewer, because of labour-saving machines, convenience foods and combined catering equipment (microwave cum convection ovens, etc.), and the changing of public taste, which seeks simpler menus and meals. The various layout of kitchen is been discussed in the unit.

1.9 Review Questions

- Q.1 What is kitchen brigade?
- Q.2 Write a note on Modern kitchen organization.
- Q.3 What are the various sections of modern hotel kitchen?
- Q.4 Who gave the concept of classical kitchen brigade?
- Q.5 Explain the functions of following sections of kitchen:

- a. Larder Section
- b. Sauce Section
- c. Roast Section
- d. Vegetable Section
- e. Soup Section
- f. Indian Section
- g. Pastry Section

Q.6 Write a note on Kitchen Layouts.

Q.7 Explain following kitchen layout:

- a. Single line (or Pullmann) kitchen
- b. Galley kitchen
- c. L-shape kitchen
- d. U-shape kitchen
- e. Island kitchen
- f. G-Shaped Kitchen

UNIT 02: JOB DESCRIPTION AND RESPONSIBILITIES OF KITCHEN STAFF

Structure

2.1 Objectives

2.2 Introduction

2.3 Job description

2.3.1 Design of Job Description

2.3.2 Uses of Job Description

Check your progress-I

2.4 Job description of kitchen staff

2.4.1 Job description of Executive Chef

2.4.2 Job description of Sous Chef

2.4.3 Job description of Pastry Chef

2.4.4 Job description of Kitchen Executive

2.4.5 Job description of Chef de Partie

2.4.6 Job description of Demi-Chef de Partie

2.4.7 Job description of Commis

2.4.8 Job description of Chef Garde Manger

Check your progress-II

2.5 Summary

2.6 Answer to check your progress

2.7 References/Bibliography

2.8 Review Questions

2.1 Objectives

After going through this Unit, you should be able to:

- Define the concepts of job description,
- Design of Job Description
- Uses of Job Description
- Understand duties and responsibilities of kitchen staff

2.2 Introduction

We presume that you are doing this course to acquire or enhance your knowledge about the modern management concepts and techniques. This understanding should, undoubtedly improve your skills as a manager, especially as a manager of people. You will also appreciate that an effective manager is one who is able to handle his or her people efficiently. In order to be a good manager of people, it will also be imperative for you to have an adequate understanding of the jobs assigned to them as also the relative job differentials in terms of their level of difficulty, responsibility, knowledge and skill. In this Unit, we shall be dealing with the concepts and techniques of job description of kitchen staff in hotel.

2.3 Job Description

Job description is a broad statement of the purpose, duties and responsibilities of a job or position. A job description is based on a detailed job analysis and usually

summarises the essential information gathered through job analysis. They describe the main tasks and responsibilities of the job clearly and concisely in order to facilitate the systematic comparison of jobs for evaluation purposes. The kind of information and amount of detail contained in the job descriptions depend on the job evaluation plan to be used. However, in all cases they must be standardised and use a uniform phraseology. If job characteristics are set out differently from one job to another, systematic comparisons are likely to be hampered and one of the main advantages of job evaluation will be lost right from the beginning.

Before we examine in detail the two cornerstones of job evaluation, viz., job analysis and job descriptions, we should mention a complementary means of describing jobs, namely by job specifications. These usually involve a listing of the personal qualifications regarded as necessary for satisfactory performance. Job specifications are mainly used in selecting and recruiting staff and are accordingly not essential to job evaluations. But certain personal attributes, such as experience, education and aptitude, may occur in both, the job description as well as the job specification. Many job evaluation plans accordingly use job specifications to complement job description.

A primary output or result of job analysis is a job description. Information obtained by job analysis is shifted and recorded concisely, clearly and fully in the job description. The job description must assemble all the important elements of a job, such as essential tasks, responsibilities, qualifications required and the functional relation of the job to other jobs.

2.3.1 Design of Job Description

There is no universally accepted standard format for job description for the reason that the form and structure of the job descriptions must depend on the kind of work being analysed and the job evaluation plan being used. For example, if the job evaluation plan comprises factors such as physical and intellectual effort, knowledge, skills, and responsibilities and working conditions, it follows that job description should be structured to reflect these factors so as to facilitate factor by factor comparison and evaluation of jobs. With non-analytical methods, job descriptions may be more flexible and simpler but must specify the title of the job and its position in the organisation, summarise the tasks performed and list the skills and abilities required.

A complete job description should rightly contain three categories of information:

1. Job mission and location,
2. The work performed, and
3. The context in which the action takes place.

With non-analytical methods, job descriptions may be more flexible and simpler but must specify the title of the job and its position in the organisation, summarise the tasks performed and list the skills and abilities required. While writing a job description one should be brief, factual and precise as far as possible. It will be helpful to follow the following guidelines while writing a job description:

1. Always be accurate about what is expressed.

2. Omit expressions which are attributes - such as uninteresting, distasteful, etc.
3. Personal pronouns should be avoided - if it is necessary to refer to the employee, the work 'operator' or 'so and so executive' may be used.
4. Do not describe only one phase of the job and give the impression that all phases are covered.
5. Generalised or ambiguous expressions, such as 'prepare', 'assist', 'handle', etc., should be omitted unless supported by data that will clarify them.
6. All statements should be clearly and simply set down - promiscuous uses of adjectives only reflect one's own opinion.
7. Describe the job as is being done, by the majority of workers holding the designation.
8. Write in simple language - explain unusual technical terms.
9. Description of a job which is part of team-work, should establish the team relationship.
10. The length of description is immaterial, it is not expected even with printed forms that all job descriptions should be of equal length but write concisely.
11. When the job analyst finds that the data he or she has to work with is insufficient, he or she should stop until sufficient data is available.
12. Put the date of completion of each description and revise it as often as changes in jobs and occupation require.
13. Job description should have the concurrence of the concerned supervisor.
14. Description should contain the initials of the persons who compile them.

2.3.2 Uses of Job Description

Apart from being a basis for job evaluation, the job descriptions can be put to many uses. These are as under:

Supervisor - Employee Communication: The information contained in the Job Description outlines the work which the incumbent is expected to perform. Hence, it is an extremely useful document for both the supervisor and the subordinate for purposes of communication. Furthermore, it helps employees to understand just what work their associates are expected to perform, thus, facilitating integration of efforts at the work-site by the employees themselves.

Recruitment, Selection, Promotion, Transfer: Information pertaining to the knowledge, skills and abilities required to perform the work to an acceptable standard, can be used as a sound basis on which to base standards are procedures for recruitment, selection, promotion and transfer.

Work Performance Appraisal: To be sound and objective, a performance appraisal system must be rooted in the work performed by the employees; such work is indicated by the duties in the job description. In such an approach, using each duty as the basis for discussion, the employee and the supervisor agree on work performance goals for the period to be covered by the subsequent evaluation report, they also agree on the criteria to be used to determine the extent to which the goals have been attained. The reports resulting from this

methodology minimize subjectivity by focussing attention on the job, as distinct from the personality traits, habits or practices of the employee. As a consequence, the results are more factual, valid and defensible than is the case in other types of systems.

Manpower Planning, Training and Development: These three processes are closely interrelated. The job description showing, in specific terms, the knowledge, skill and ability requirements for effective performance of the duties, is a sound and rational basis for each of these processes. Analysis of various types of jobs at progressively more senior levels will indicate logical sources of supply for more senior posts, as part of manpower planning, it will also indicate the gap to be bridged in terms of knowledge, skill and ability, thus providing a sound basis for preparing job-related training and development programmes.

Industrial Relations: Frequently issues arise in the industrial relations field which have their origin in the work to be undertaken. In these instances the job description may be used to form a factual basis for discussion and problem resolution.

Organisation and Procedure Analysis: The duties and responsibilities outlined in the job description may be used to great advantage by management in analysing organisation and procedures, because they reveal how the work is organised, how the procedures operate and how authority and responsibility are apportioned.

CHECK YOUR PROGRESS-I

Q.1 Define job description?

.....

Q.2 How job description is designed?

.....

Q.3 What are the uses of job description?

.....

2.4 Job Description of Kitchen Staff

Job description is a broad statement of the purpose, duties and responsibilities of a job or position. A job description is based on a detailed job analysis and usually summarises the essential information gathered through job analysis. They describe the main tasks and responsibilities of the job clearly and concisely in order to facilitate the systematic comparison of jobs for evaluation purposes. The hotel kitchen employs people at various positions depending upon the functions needs to be performed at various sections of kitchen. Let us discuss the job responsibilities of each of these positions, which will make us clearer of the kitchen department.

2.4.1 Job Description of Executive Chef

An executive chef has to direct and guide the food production team in providing a consistent quality of food and beverage in all outlets, as per international standards, in order to achieve the maximum level of guest satisfaction and organizational profitability in an atmosphere of high employee morale. The specific responsibilities of an executive chef are to:

- i. Drive the vision and the goal of the company.
- ii. Reflect the company's philosophy by providing the highest standard of personalized and attentive, but discrete service in a professional and friendly manner, which exemplifies the best of hospitality.
- iii. Always lead by example, adopting a positive attitude to keep the team spirit at its highest levels.
- iv. Greet with a smile, colleagues and guests at any time or place within the hotel, whether front or back of house.
- v. Anticipate guests needs and wishes, and surpass their expectations.
- vi. Look continuously for ways to achieve the hotel's strategic vision and goals by working as a team and being a team player.
- vii. Be proactive in developing oneself by taking advantage of all learning opportunities, and by striving to achieve the goals of one's personal career development plan and personal mission statements.
- viii. Be committed to quality and profitability of product to ensure that guests return and to aim to be the best hotel or outlet.
- ix. Identify and develop new products and equipment, to enhance the product quality.
- x. Develop and define quality standards of food preparation and presentation.
- xi. Define the organization of work within the department including assignments, time schedules, and vacations of staff.
- xii. Ensure the quality of food preparation and presentation, as per organizational standards.
- xiii. Ensure availability of stock and raw ingredients by proper planning and coordination with purchase and stores.
- xiv. Coordinate with the engineering department to carry out preventive maintenance programme in the kitchen.
- xv. Establish recipes and methods of preparation, inform the F&B director of significant change in prices affecting the preparation of menu items.
- xvi. Recommend menu pricing in coordination with F&B director/F&B manager/F&B controller/banquet manager.

- xvii. Be responsible for the hygiene and cleanliness of the kitchen areas, equipment, and staff.
- xviii. Ensure compliance with company and hotel policies department employees.
- xix. Constantly monitor key performance indicators for the department and take appropriate action.
- xx. Analyse and monitor costs, (material, energy and staff) to ensure high profitability on a regular basis and initiate corrective action whenever necessary.
- xxi. Ensure that menus are changed on a regular basis, as per corporate guidelines and market needs, in coordination with F&B manager/F&B director.
- xxii. Ensure that the best quality of raw material is procured and used in food preparation.
- xxiii. Prepare capital and operational budget in order to achieve desired profitability.
- xxiv. Ensure storage of raw and cooked food/raw material as per international standards.
- xxv. Keep oneself updated with market knowledge and trends by conducting regular market surveys in coordination with the purchase department.
- xxvi. Ensure department employees are fully trained through constant on-the-job training.
- xxvii. Attend behavioural and vocational training in own and related work areas to enhance skills and develop multi-functionality.
- xxviii. Ensure practice of hygiene and safety precautions as well as compliance with hotel and company policies by the kitchen staff through training.
- xxix. Provide career development and succession planning for subordinate through training.

2.4.2 Job Description of Sous Chef

A sous chef has to organize, develop, and supervise the food production in the main kitchen as per standards and recipes developed by the executive chef and to handle independently one of the satellite kitchens assigned to him/her. The specific responsibilities of a sous chef are to:

- i. Look after the function of the executive sous chef during his/her absence.
- ii. Train staff on improved work procedures, quality food production, economical usage of food materials, and the attractive presentation of food items.
- iii. Approve requisitions from stores for stations assigned and in the executive sous chef's absence for the entire main kitchen.
- iv. Be responsible for all food production in area assigned to him.
- v. Be responsible for overall food cost control without affecting standards and specifications as laid out by top management.
- vi. Account for the usage, consumption, spoilage, and control of food stuff produced or stored under his/her supervision.
- vii. Be responsible for the preparation of mise en place at all stations.
- viii. Attend the food and beverage meetings and departmental meetings.
- ix. Maintain all attendance records.

2.4.3 Job Description of Pastry Chef

The pastry chef has to organize, develop, and supervise the pastry shop including stations such as bakery, pastry, and confectionery. The specific responsibilities of a pastry chef are to:

- i. Be responsible for the mise en place and food preparation for all bakery and pastry stations.
- ii. Account for the usage, consumption, and control of all foods and equipments in the stations supervised by him/her.
- iii. Train staff in his/her stations on improved work procedures, quality food production. The economical usage of food materials, and the attractive presentation of food items.
- iv. Supervise and train the chef de parties, commis, and apprentices, and to review staff working in his/her department.
- v. Initiate performance reviews of staff working in his/her department.
- vi. Attend the daily and weekly kitchen chef's meetings and the F&B meetings.
- vii. Approve requisitions from stores for materials required in his/her stations.
- viii. Recommend schedule changes and changes in personnel for adequate manning of all stations.

2.4.4 Job Description of Kitchen Executive

A kitchen executive ensures that the food production team provides a consistent quality of F&B in the area/shift under his/her control, as per the corporate preset international standards, in order to maximize guest satisfaction and organizational profitability in an atmosphere of high employee morale. The specific responsibilities of a kitchen executive are to:

- Ensure adherence to organizational standards of food quality, hygiene, preparation, and presentation in his/her kitchen.
- Make sure all the kitchen equipment and machinery is in good working order at all times, in his/her kitchen.
- Recommend changes in systems and procedures to increase efficiency and improve service levels.
- Ensure prompt, courteous, and accurate service to all the guests to achieve high level of guest satisfaction.
- Be responsible for maintaining of records/documentation in his/her area as per operational/control requirements.
- Check the quality and availability of raw ingredients at all times for smooth operation.
- Provide timely follow-up on any sick team member and convey the report immediately to HR and executive chef.
- Ensure buffets/food displays are set up and maintained professionally, as per organizational standards.
- Be responsible for the hygiene standards of his/her kitchen, storage areas, equipment, and machinery.
- Control food wastage, without compromising on food quality.
- Check that cleaning schedules by kitchen stewarding department are being followed in timely manner.
- Ensure par level of dry stores and perishables are maintained on daily basis, and also ensure correct store requisitioning.

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- Check attendance and punctuality of every team member.
 - Provide functional assistance to all subordinates and peers of various areas.
 - Ensure excellent relations and professionalism amongst all staff in his/her kitchen and with related departments and staff.
 - Work in close coordination with F&B service team.
 - Maintain appropriate and professional communication with F&B team at all given times, and for any special occasions.
 - Provide constant on-the-job and classroom training for his/her kitchen employees.
 - Personally conduct critical training sessions.
 - Encourage team building through regular informal meetings and keep an open door policy.
 - Coordinate functions and activities with other F&B section, engineering/housekeeping etc. whenever required.
 - Assist sous chef with on-the-job training and class room training for his/her kitchen and related F&B employees.
 - Attend behavioural, vocational, and skill-related training, to enhance his/her skills and develop multi-functionality.
 - Provide cross training to employees of other department.
 - Personally conduct critical training sessions.
 - Provide constant on-the-job training and coaching to all the staff in the department.
 - Share his/her skill and knowledge with all employees; follow the company standard operating procedures (SOP) in his/her kitchen.
 - Counsel subordinates in work-related and personal matters.
 - Attend behavioural training in own related work areas to enhance skills and develop multi-functionality.
 - Maintain records as required of training in the department.

2.4.5 Job Description Of Chef De Partie

A chef de partie assists his/her superior in maintaining the highest standards of quality in food preparation by following standard recipes and high level of hygiene standards maintained as per the hazard analysis and critical control points (HACCP) standards in his/her area, in order to maximize guest satisfaction and profitability in an atmosphere of high employee morale. The specific responsibilities of a chef de partie are to:

- Ensure prompt and accurate service by all kitchen staff under his/her control, to all the customers to achieve a high level of customer satisfaction.
- Be responsible for implementing hotel standards on food quality, preparation, and presentation in his/her section/shift.
- Recommend changes in systems and procedures to increase efficiency and improve service levels.
- Recommend changes in menu at the time of new menu by introducing new dishes/presentation.
- Ensure that the hygiene and cleanliness of the kitchen area is maintained as per predetermined standards.

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- Be responsible for controlling food wastage, without compromising on food quality.
 - Ensure proper security and safety of raw and cooked food, and equipment by proper storage.
 - Make sure that all the kitchen equipment is operated, maintained and stored properly and is safe to use.
 - Check that all the kitchen records are maintained properly at all times.
 - Ensure that organizational policies and standards are adhered to by all in the department.
 - Ensure availability of ingredients in the kitchen, at all times, in order to provide a prompt service.
 - Assist the chef de partie/sous chef in implementing standards set by executive chef on food quality, preparation, and presentation in his/her section.
 - Assist the sous chef and higher authorities to define the organization of work within his/her kitchen department including assignments, time schedules, and vacations.
 - Control food wastage without compromising on food quality.
 - Check that inter-kitchen food transfers are accurate and conform to hotel policy.
 - Ensure proper mise en place in his/her production sections for speedy preparation and service.
 - Make sure that hygiene and cleanliness of the kitchen area/equipment is maintained as per predetermined HACCP standards.
 - Discuss production planning with his/her commis, demi chef de partie, and concerned higher kitchen authorities.
 - Ensure all the company SOPs are followed by all the team member.
 - Make sure the cleaning schedules by kitchen stewarding department are being followed in timely manner.
 - Ensure par level of dry stores and perishables are maintained on daily basis, and also ensure of correct store requisitioning.
 - Receive daily requirement from storeroom and get it checked and duly signed by his/her senior kitchen executive.
 - Recommend quality status on all the products in his/her kitchen to senior authority and rectify it as soon as possible.
 - Register complaints regarding improper machinery functioning, or employee's ill behaviours to his/her kitchen executive.
 - Brief his/her team members on menu changes or introduction of new ingredients/new dishes on the menu.
 - Provide functional assistance to all subordinates and peers of various kitchens.
 - Ensure excellent relations and professionalism amongst all staff in his/her kitchen and with related departments.
 - Maintain appropriate and professional communication with all the team members at all given times.

2.4.6 Job Description of Demi-Chef De Partie

A demi chef de partie assists his/her superior in maintaining the highest standards of quality in food preparation by following standards receipts and high

level of hygiene standards maintained as per the HACCP standards in his/her area, in order to maximize guest satisfaction and profitability in an atmosphere of high employee morale. The specific responsibilities of a demi chef de partie are to:

- Ensure prompt and accurate service by all kitchen staff under his/her control, to the entire guests to achieve high level of customer satisfaction.
- Assist the chef de partie in implementing standards set by executive chef on food quality, preparation, and presentation in his/her section.
- Assist the chef de partie to define the organization of work within his/her kitchen department including assignments, time schedules, and vacations.
- Control food wastage without compromising on food quality.
- Make sure that all the kitchen equipment is operated, maintained, and stored properly and is safe to use.
- Ensure all organizational policies and standards are adhered to by all in the department.
- Check that inter-kitchen food transfers are accurate and conform to hotel policy.
- Ensure proper mise en place in his/her production sections for speedy preparation and service.
- Make sure that hygiene and cleanliness of the kitchen area/equipment is maintained as per predetermined standards.
- Ensure all the kitchen records are maintained properly at all times as per organizational standards in his/her department.
- Discuss production planning with his/her commis and concerned higher kitchen authorities.
- Receive daily requirement from storeroom and get it checked and duly signed by his/her senior kitchen executive.
- Maintain daily log book and register equipment issues, and any critical information to be passed on to higher authority or next shift.
- Recommend quality status on all the products in his/her kitchen to senior authority.
- Register complaints regarding improper machinery functioning, or employee ill behaviour to his chef de partie or senior kitchen executive.
- Provide assistance to all subordinates and peers of various kitchens.
- Promote excellent relations and professionalism amongst all staff in his/her kitchen and with related departments.
- Coordinate with other food and beverage section, engineering/housekeeping, etc. whenever required.
- Ensure appropriate and professional communication with all the team members at and develop multi-functionality.
- Attend behavioural, vocational, and skill-related training, to enhance his/her skills and develop multi-functionality.
- Provide constant on-the-job training and coaching to subordinates.
- Share his/her skill and knowledge with all employees.

2.4.7 Job Description of Commis

A commis has to prepare and provide the highest quality food in his/her area by following standard recipes, and high level of hygiene standards maintained as

per the HACCP standards, in order to maximize guest satisfaction and optimum profitability in an atmosphere of high individual morale. The specific responsibilities of a commis are to:

- Prepare food and provide prompt, courteous, and accurate service to all the customers as per organizational standards of quality, as directed.
- Control food wastage without compromising on food quality.
- Prepare all mise en place in production sections for smooth kitchen operation, as directed.
- Ensure hygiene and cleanliness of his/her area at all the times.
- Assist chef de partie in implementing and following organizational standards on food quality, preparation, and presentation.
- Be responsible for maintaining all kitchen equipment in his/her area in good working condition.
- Take responsibility for adherence to all organizational policies and procedures.
- Maintain complete hygiene in his/her work area and adhere to the HACCP standards.
- Ensure exact collection of perishables, grocery, and meat/fish items as per the storeroom requisition.
- Ensure timely cleaning and sanitization of all the equipment and tools in appropriate hygienic manner.
- Recommend daily requirement from store room to the demi chef de partie.
- Maintain daily log book and registering equipment issues, and any critical information to be passed on to higher authority or next shift.
- Recommend quality status on all the products in his/her kitchen to demi chef de partie.
- Provide assistance to all subordinates and peers of various kitchens.
- Promote excellent relations and professionalism amongst all staff in his/her kitchen and with related departments.
- Coordinate with other food and beverage section, engineering/housekeeping, etc. Whenever required.
- Ensure appropriate and professional communication with all the team members at all given times.
- Attend behavioural, vocational, and skill-related training, to enhance his/her skills and develop multi-functionality.

2.4.8 Job Description of Chef Garde-Manger

The responsibilities of the Chef Garde-Manger, therefore, are many and varied. This person is responsible to the Chef for the efficient running of the Larder department and for the co-ordination of the work of its staff; for the training and discipline of larder staff; for the foodstuffs in the department, some of which may be stored in refrigerators or even in deep freeze, or preserved by other means. The Chef Garde-Manger is responsible for keeping a record of such foodstuffs and a day-by-day record of issues to kitchen or other departments. The Chef Garde-Manger must study the menus in advance, so as to be able to order meat, fish, etc., in time for the foodstuff to be prepared and cleaned and made ready for the kitchen in time for it to be cooked; and also to order all necessary stores for

the various larder productions such as salads, hors d'oeuvres, sauces, buffets, etc. The Larder Chef is responsible for the efficient storage of food to avoid deterioration and wastage and for cleanliness and hygiene in the department, to avoid any danger of contamination and possible food poisoning. He should also advise the Head Chef as to what foodstuff items require using to prevent eventual wastage.

LARDER CONTROL

If this department is to be run efficiently and economically, it is essential that the Chef Garde-Manger should exercise the strictest possible control over the foodstuffs received and stored in the department. This involves:

- Checking the quantity and quality of all goods delivered to the larder.
- Ensuring that all foodstuffs are stored at the right temperature and that they can be easily checked.
- Ensuring that the food is protected from contamination by vermin.
- Ensuring that portion control is rigidly carried out, e.g. a given weight of fish, poultry, meat, should always produce the required number of portions.
- Ensuring that food is not overstocked and stocks of food are regularly turned over.
- Making every effort to maintain the highest possible standard of hygiene and to prevent any deterioration in the foodstuffs under his control.
- Taking every precaution to discourage pilfering.
- Ensuring (and this is imperative) that a simple daily stock sheet be kept by each section within the Larder and handed to the Chef Garde-Manger at the end of each day's business to enable him to write out his order for the following day.

CHECK YOUR PROGRESS-II

Q.1 what are the duties of Executive chef?

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Q.2 What are the duties of chef garde manger?

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Q.3 Write job description of following:

- Pastry chef

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- Commis
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- Chef de partie
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2.5 Summary

Jobs are subjected to analysis to find out precisely what the duties, responsibilities, working environment and other requirements of a job are and to present these in a clear, concise and systematic way. The information gathered through job analysis can be used for a wide range of personnel and general management decisions. Job analysis is also a prerequisite to preparing job descriptions. In fact, job descriptions summarise the essential information gathered through job analysis. The various concepts and methods discussed in this Unit are useful in hotel industry as they are in any other.

2.6 Answer To Check Your Progress

Check Your Progress-I

- Q.1 Please refer to section 2.3
- Q.2 Please refer to section 2.3.1
- Q.3 Please refer to section 2.3.2

Check Your Progress-II

- Q.1 Please refer to section 2.4.1
- Q.2 Please refer to section 2.4.8
- Q.3 Please refer to section 2.4.3, 2.4.7, and 2.4.6

2.7 References/Bibliography

1. Dennis L Crap, John Cousins, Food and Beverage Service, Hodder Education 7th Edition.
2. Bobby George, Sandeep Chartergee, Food and Beverage Service and Management.
3. P S Bali, Food Production operations, Oxford University Press, New Delhi

2.8 Review Questions

- Q. Write job description of following kitchen personnel:
- Executive Chef
 - Sous Chef
 - Pastry Chef

- Kitchen Executive
- Chef de Partie
- Demi-Chef de Partie
- Commis
- Chef Garde Manger

UNIT 03: KITCHEN TOOLS AND EQUIPMENTS

Structure

- 3.1 Objectives
- 3.2 Introduction
- 3.3 Large Equipments
 - 3.3.1 Ranges
 - 3.3.2 Induction cook-top
 - 3.3.3 Oven
 - 3.3.4 Deep Fat Fryer
 - 3.3.5 Steamers
 - 3.3.6 Hot Cupboards and Bain-Marie
 - 3.3.7 Grills and Salamander
 - 3.3.8 Tilting Skillet
- Check Your Progress-I
- 3.4 Mechanical Equipment
 - 3.4.1 Mixer
 - 3.4.2 Peeler
 - 3.4.3 Miners
 - 3.4.4 Refrigerator
 - 3.4.5 Dishwasher
- Check Your Progress-II
- 3.5 Utensils and small equipments
 - 3.5.1 Pots
 - 3.5.2 Pans
 - 3.5.3 Measuring Equipments
 - 3.5.4 Hand Tools
 - 3.5.5 Sinks
 - 3.5.6 Tables
- 3.6 Summary
- 3.7 Answer to check your progress
- 3.8 References/Bibliography
- 3.9 Terminal Questions

3.1 Objectives

After reading this unit the learner will be able to understand the uses of:

- Large Equipments used in kitchen
- Mechanical Equipment used in kitchen
- Utensils and small equipments used in kitchen

3.2 Introduction

Kitchen equipment is expansive and to justify the expanse it is essential that maximum use is made of it. This can only be done if the equipment works efficiently and this depends upon the care and maintenance. The type of fuel used is an important factor. Though solid fuel and oil both have their place under certain circumstance, but for professional cookery the choice lies between electricity and gas. In India soft coke is being in small establishments sometimes. Firewood is used in Tandoor. The routine use, care and cleaning of all items of

equipment are important and this should be appreciated and understood. When selecting equipment, capacity, trade name, good quality simple design and easy to clean should be the criteria. The purpose and price is also considered.

Kitchen equipment may be divided into following categories:

1. Large equipment: - Ranges, Steamers, Boiling pan, Fish fryers, Sinks and Tables etc.
2. Mechanical Equipment: - Peeler, Mincers, Mixers, Refrigerator, Dishwasher.
3. Utensils and small equipments:- Pots, Pans, Whisks, Spoons etc.

3.3 Large Equipments

A vast array of specialized equipment is available for today's kitchens. It would take a large book, not just a short chapter, to describe all of the many items you will encounter in your career items such as pasta machines, crêpe machines, burger formers, breading machines, cookie droppers, beverage machines, Greek gyro broilers, doughnut glazers, conveyor fryers, and so on. In this technological age, nearly every year brings new tools to simplify various tasks. In this section we will learn about some of the large equipments used in kitchen.

3.3.1 Ranges

A large variety of stove is available fired by gas, electricity, solid fuel or oil. Solid tops should be washed clean, or wiped clean with a cleaning pad. When cool, the stove is more thoroughly cleaned by washing and using an abrasive such as emery paper. After any kind of cleaning, a solid top should always be lightly greased. On the open type of stove all the bars and racks should be removed, immersed in hot water with detergent, scrubbed clean, dried and put back in the place on the stove. All gas jets should then be lit to check that none are

blocked. All enamel parts of the stove should be cleaned while warm with hot detergent solution, rinsed and dried. The inside of ovens and oven racks should be cleaned while slightly warm, using detergent solution and mild abrasive. In cases of extreme dirt or grease being stuck on to the stove or oven, a caustic jelly may be used, but thorough rinsing must take place afterwards. Oven doors should not be slammed as this is liable to cause damage. The unnecessary lighting or the lighting of ovens too early can cause wastage of fuel, which is a waste of money.



Open Burner Gas Range with Griddle

3.3.2 Induction Cook-Top

The top of an induction unit does not become hot. Rather, it works by magnetically agitating the molecules in steel or iron cookware so the cookware becomes hot. As a result, much less energy is used and the kitchen stays cooler, because only the pots and pans and their contents become hot. There are no hot surfaces or open flames. Also, no warm-up is required. The top can be turned instantly on or off. Small, easily portable induction burners are available. These are useful for off-premise catering operations, for buffet service, and even for tableside heating and cooking. The disadvantage of this cook-top is that only iron or steel pots can be used. Traditional aluminium or copper cookware will not work. Some manufacturers of cookware have responded to the new demand by producing pots and pans made of aluminum sandwiched between layers of stainless steel. In this way, the good heat-conducting qualities of aluminium are preserved as well as adapted to this new technology.



Induction Cook Top

3.3.3 Oven

The oven and the range top are the two workhorses of the traditional kitchen, which is why they are so often found in the same unit. Ovens are enclosed spaces in which food is heated, usually by hot air or, in some newer kinds of ovens, by microwaves or infrared radiation. In addition to roasting and baking, ovens can do many of the jobs normally done on the range top. Many foods can be simmered, stewed, braised, or poached in the oven, freeing the range top and the chef's attention for other tasks. There are many kinds of ovens beyond those discussed here, but they are often for specialty or high volume uses. These include conveyor ovens, which carry foods through the oven on a steel conveyor belt; holding ovens or warmers, which are designed to hold many types of foods at serving temperatures for extended periods without drying out or overcooking (this category includes ovens that also cook the food, then automatically switch to holding temperature); and high-volume roll-in ovens, with large doors into which one can roll carts loaded with trays of food.

Conventional Ovens: Conventional ovens operate simply by heating air in an enclosed space. The most common ovens are part of the range unit, although separate oven units or ovens as part of a broiler unit are also available. Stack ovens are units that consist of individual shelves or decks arranged one above the



Deck Oven



Conventional oven

other. Pans are placed directly on the oven deck rather than on wire shelves. Temperatures are adjustable for each deck.

Convection Ovens: Convection ovens contain fans that circulate the air and distribute the heat rapidly throughout the interior. Because of the forced air, foods cook more quickly at lower temperatures. Also, shelves can be placed closer together than in conventional ovens without blocking the heat flow.

3.3.4 Deep Fat Fryer

These are among the items of equipment that are commonly used in catering establishments. An unskilled or careless worker can cause money to be lost by food or fat being spoilt through misuse of the friture. Modern fryers are heated by gas or electricity. Most incorporate a thermostatic control in order to save fuel and prevent oven heating. A fairly recent development is the "cool zone". This is where the heating elements are at the sides of the fire but the lower part is kept at a reduced temperature. This stops particles that may fall off the food being fried from dropping to the bottom of the friture, burning and so spoiling other foods cooked.

This form of heating also saves fat; Frying baskets can also be used. Deep fat fryers should be cleaned daily after use by:

- Turning off the heat and allowing the fat to cool.
- Draining off and straining the fat.
- Closing the stopcock, filling the fryer with hot water containing detergent and boiling for 10-15 minutes.
- Draining off the detergent water, refilling with clean water plus vinegar and water, and re-boiling for 10-15 minutes.
- Draining off the water, drying the fryer, closing the stopcock and refill with clean fat.

Do's and Don'ts : The following points relate to the operation of the equipment.

- When filling kettles with solid fats, set the thermostat at 250°F (120°C) until the fat has melted enough to cover the heating elements.
- Keep the kettles filled to the fill line.
- Make sure the drain valve is shut before adding fat to the empty kettle.
- Check the accuracy of the thermostat regularly by reading the fat temperature with a thermometer.



Deep Fat Fryer

3.3.5 STEAMERS

Steaming ovens that work from a main steam supply need little maintenance. The door controls should be greased occasionally. The steamer trays and runners should be washed in hot detergent water. This type of equipment is usually fitted with a gauge which registers steam pressure (1/2 lb. per square inch), also an overflow valve which gives a warning whistle, if the pressure reaches danger point. These should be periodically checked by a qualified engineer to ensure that they are working correctly. A constant supply of water should be maintained in the generating tank. Steamer trays and the inside of the steamer should be cleaned with detergent water and rinsed. Many types are available in different metals and various sizes (10, 15, 20 and 40 liters or more capacity). They may be heated by gas, electricity or steam from the main supply. As they are used for cooking large quantities of food, it is important that they do not allow the food to burn. It is for this reason that the steam-jacket type (double walled) boiler is most suitable. Many of these boilers are fitted with a tilting device to facilitate the emptying of the contents. After use, the pan and lid should be thoroughly washed with a mild detergent solution and then rinsed well. Any moving parts should be greased, occasionally and checked to see that they are in good working order. If gas fired, the gas jets and pilot should be inspected to ensure correct working. If a pressure gauge and safety valve are fitted, these should be checked to see that they are working correctly.



3.3.6 Hot Cupboards and Bain-Marie

Hot cupboards (commonly referred to in the trade as the hot plates) are used for heating plates and serving dishes and for keeping food hot. Care should be taken to see that the amount of heat fed into the hot cupboards and a thermostat is necessary in maintaining this. Hot cupboards may be heated by gas, electricity or steam. The doors should slide easily and essential greasing may be necessary. The tops of most cupboards are used as serving counters and should be heated to a higher temperature than the inside. These tops are usually made of stainless steel and should be cleaned thoroughly after each service. (Method as for cleaning stainless steel) Bain-marie in this case are open walls of water used for keeping foods hot and are available in many designs, some of which are incorporated into the hot cupboards, some in serving counters, and there is a type which is fitted at the end of the cooking range. They may be heated by steam, gas or electricity, and sufficient heat to boil the water in the bain-marie should be available. Care should be taken to see that a bain-marie is never allowed to burn dry when the heat is turned on. After use, the heat must be turned off, and the bain-marie cleaned thoroughly inside and out side with

detergent water, rinsed and dried. And drain off tap should be than checked for any blockage and then closed.

3.3.7 Grills and Salamander

The salamander, heated from above, probably causes more wastage of fuel than any other item of kitchen equipment, through being allowed to burn unnecessarily for long unused periods. Most salamanders have more than one set of heating element or jets, and it is not always necessary to have them all turned on. Salamanders are heated by gas or electricity or a combination of the two. Bars and draining trays should be cleaned regularly with hot water containing grease solvent such as soda. After rinsing thoroughly they should be replaced and the salamander lit for a few minutes to dry the bars. For an UNDER FRIED GRILL to work effectively it must be capable of cooking food quickly and it should



reach a high temperature (within 15-20 minutes) after lighting and the heat should be turned off immediately after use. When the bars are cool, they should be removed and washed in hot water containing a grease solvent, thoroughly rinsed and dried, and replaced upon the grill. Care should be taken with the fire-bricks if they are used for lining the grill as they are easily broken.

CONTACT GRILLS

These are sometimes referred to as a double-sided infra-grills, having two heated surfaces facing each other. These grills are electrically heated and are capable of cooking certain foods very quickly. The electricity should be turned off after use. When the grill is cool, the cooking surface should be cleaned with a stiff wire-brush. The surfaces are then wiped clean with a damp cloth and lightly oiled to prevent rusting.

3.3.8 Tilting Skillet

The tilting skillet, also known as the tilting brazier and tilting fry pan, is a versatile and efficient piece of equipment. It can be used as a griddle, fry pan, brazier, stew-pot, stockpot, steamer, and bain-marie or steam table. The tilting skillet is a large, shallow, flat bottomed pot. To look at it another way, it is a griddle with sides 6 inches (24 cm) high, plus a cover. It has a tilting mechanism that enables liquids to be poured out of it. Power may be gas or electric. Clean the skillet

immediately after each use, before food has time to dry on. Add water, turn on the skillet to heat it, and scrub thoroughly.



CHECK YOUR PROGRESS-I

Q.1 Write short note on kitchen ranges.

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Q.2 What are the uses of griller?

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Q.3 Which equipment is used for bulk frying?

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Q.4 What are the different types of Oven?

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Q.5 Describe tilting skillet.

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3.4 Mechanical Equipment

We use various mechanical equipments in kitchen like mixers, food processors, cutters, mincing machines, grinders etc. in this section we will study about some of the mechanical equipments used in modern hotel kitchens.

3.4.1 Mixer

Vertical mixers are important and versatile tools for many kinds of food mixing and processing jobs, both in the bakeshop and in the kitchen. Bench-model mixers range in capacity from 5 to 20 quarts (5 to 20 L). Floor models are available as large as 140 quarts (133 L). Adaptor rings enable several bowl sizes to be used on one machine. Most mixers have three operating speeds.



Mixer

AGITATOR ATTACHMENTS

There are three main mixing attachments, plus some specialized ones. The paddle is a flat blade used for general mixing. The wire whip is used for such tasks as beating cream and eggs and making mayonnaise. The dough arm is used for mixing and kneading yeast doughs.



Whisker



Creamer



Dough kneader

3.4.2 Peeler

Use for peeling the raw potato, with the help of special emery lining inside the feeder, Peeler is designed aesthetically and is used to peel the skin of potatoes in faster way. Potato peeler leads to minimum peel loss and for better peeling and continuous flow of water in the drum helps to carry away the waste from drainage pipe. The drum storage capacity ranges from 6 to 8 kg potatoes.

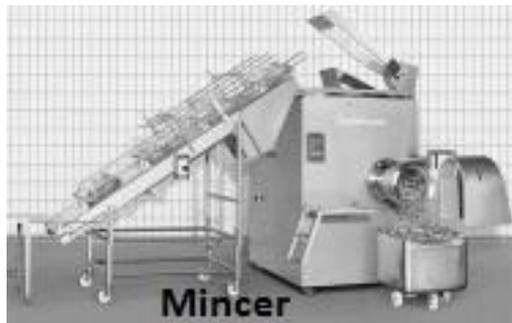
Care while using peeling machines:

- Potatoes should be free of earth and stones before loading into the machine, otherwise damage to the machine will result.
- Before any potatoes are loaded, the water spray should be turned on and the abrasive plates set in motion.
- The interior should be cleaned daily and the abrasive plate removed to ensure that small particles are not lodged below.
- The peel trap should be emptied as frequently as required.
- The waste outlet should be kept free from obstructions.



3.4.3 Mincers

A meat grinder or meat mincer is a kitchen appliance for grinding, fine mincing or mixing raw or cooked meat, fish, vegetables or similar food. It replaces tools like the mincing knife, for example, which has been used to produce minced meat, filling etc. The producer puts the minced food into a funnel, which is placed on the top of the grinder. From there the material goes on



a horizontal screw conveyor. This screw conveyor that can be powered by a hand wheel or an electric motor squashes and partially mixes the food. At the end of the screw conveyor there is a knife installed directly in front of the fixed hole plate. At this opening the minced meat comes out of the machine. The fineness of the meat depends on the size of the holes of the plate. The meat grinder was invented by Karl Drais in the 19th century. By changing the hole plate it is also possible to produce breadcrumbs or fill sausage casing. After the drop from the retainer, it is possible to change the hole plate. By removing the fixing screw the grinder can be disassembled completely for cleaning. Besides the domestic manually or motor operated grinders, there are also grinders for butchery (table- or shop-grinders for example) and for the food industry. Some large machines are able to produce several tons per hour.

3.4.4 Refrigerator

In order to maintain a refrigerator at peak efficiency, the following points should be observed:

- Defrost weekly. The control should be turned to defrost, the racks should be emptied and racks and interior surfaces washed, rinsed and dried. If the refrigerator is not defrosted regularly, excess frost accumulates on the

- Cooling system, acts as an insulator and causes the refrigerator motor to work longer than is necessary, thus shortening the life of the components.
- The door or doors should be kept closed as much as possible. If too much warm air is allowed to enter the refrigerator plant, it overworks and excess frost can accumulate on the cooling system.
- Food should be stored sensibly and in such a way that the cold air can circulate all around. Excessive packing of food into a refrigerator should be avoided.
- A qualified engineer should be called in at the first sign of any defect in the machinery operating a refrigerator.



3.4.5 Dishwasher

A dishwasher is a mechanical device for cleaning dishes and eating utensils.

Dishwashers can be found in restaurants and private homes. Unlike manual dishwashing, which relies largely on physical scrubbing to remove soiling, the mechanical dishwasher cleans by spraying hot water, typically between 55 to 75 °C (130 to 170 °F) at the dishes, with lower temperatures used for delicate items. A mix of water and detergent is used for cleaning purposes, followed by clean water to remove the detergent residue.



Some dishwashers have multiple wash and rinse periods within the complete cycle. In some dishwashers, a rinsing aid (also called rinse aid) can be added to the rinse cycle to improve drying and avoid water spots remaining on dry items. Large heavy-duty dishwashers are available for use in commercial establishments (e.g. hotels, restaurants) where a large number of dishes must be cleaned. Unlike a home dishwasher, commercial units typically are not multi-level, and only wash a single tray of dishes per cycle. This is not an inconvenience since trays are batch-processed consecutively one after the other. They can wash a rack of dishes or a rack of 25 glasses in just approximately one minute.

CHECK YOUR PROGRESS-II

Q.1 Write short note on mincing machine.

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Q.2 What are the uses of Peeler?

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Q.3 Which equipment is used for cold storing food?

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Q.4 Describe dish washer.

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3.5 Utensils and Small Equipments

Apart from large and mechanical equipments various utensils, small equipments and hand tools are used in kitchen some of them are described in this section.

3.5.1 Pots

Stockpot: A large, deep, straight-sided pot for preparing stocks and simmering large quantities of liquids. Stockpots with spigots allow liquid to be drained off without disturbing the solid contents or lifting the pot. Sizes: 8-200 quarts (liters).

Saucepot: A round pot of medium depth. Similar to a stockpot but shallower, making stirring or mixing easier. Used for soups, sauces, and other liquids. Sizes: 6-60 quarts (liters).

Brazier

A round, broad, shallow, heavy-duty pot with straight sides. Also called a rondeau. Used for browning, braising, and stewing meats. Sizes: 11-30 quarts (liters).



Stockpot

Stockpot with spigot



Saucepot

Brazier



Straight-sided sauté pan



Slope-sided sauté pan



Double boiler

3.5.2 Pans

Saucepan: Similar to a small, shallow, light saucepot, but with one long handle instead of two loop handles. May have straight or slanted sides. Used for general range-top cooking. Sizes: 11 to 15 quarts (liters).

Sauté pan, straight-sided: Also called a sautoir. Similar to a shallow, straight-sided saucepan, but heavier. Used for browning, sautéing, and frying. Because of its broad surface area, the sauté pan is used for cooking sauces and other liquids when rapid reduction is required. Sizes: 21 to 25 inches (65-130 mm) deep; 6-16 inches (160-400 mm) in diameter.

Sauté pan, slope-sided: Also called a sauteuse. Used for general sautéing and frying of meats, fish, vegetables, and eggs. The sloping sides allow the cook to flip and toss items without using a spatula, and they make it easier to get at the food when a spatula is used. Sizes: 6-14 inches (160-360 mm) top diameter.

Cast-iron skillet: Very heavy, thick-bottomed fry pan. Used for pan-frying when steady, even heat is desired.

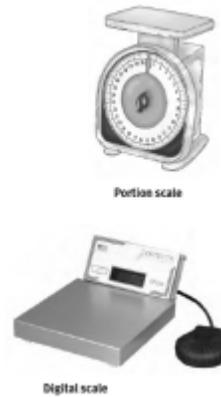
Double boiler: A pot with two sections. The lower section, similar to a stockpot, holds boiling water. The upper section holds foods that must be cooked at low temperatures and cannot be cooked over direct heat. Size of top section: 4-36 quarts (liters).

3.5.3 Measuring Equipments

Scales. Most recipe ingredients are measured by weight, so accurate scales are important. Portion scales are used for measuring ingredients as well as for portioning products for service. Traditional portion scales are spring-operated and usually have a dial to indicate weight. More accurate digital scales are electrically operated and provide a digital readout.

Volume measures used for liquids have lips for easy pouring. Sizes are pints, quarts, half-gallons, and gallons. Each size is marked off into fourths by ridges on the sides.

Measuring cups are available in 1-, 1/2-, 1/3-, and 1/4-cup sizes. They can be used for both liquid and dry measures. Measuring spoons are used for measuring very small volumes: 1 tablespoon, 1 teaspoon, 1/2 teaspoon, and 1/4 teaspoon. They are used most often for spices and seasonings. Ladles are used for measuring and portioning liquids. The size, in ounces, is stamped on the handle. Scoops come in standard sizes and have a lever for mechanical release. They are used for portioning soft solid foods. The number of the scoop indicates the number of level scoopfuls per quart. In actual use, a rounded scoopful is often more practical than a level scoopful, so exact weights will vary.



Thermometers measure temperature. There are many kinds for many purposes.

- A meat thermometer indicates internal temperature of meats. It is inserted before cooking and left in the product during cooking.
- An instant-read thermometer gives readings within a few seconds of being inserted in a food product. It reads from 0°F to 220°F. Many chefs carry these in their jacket pocket like a pen, ready whenever needed. Instant-read thermometers must not be left in meats during roasting, or they will be damaged.
- Fat thermometers and candy thermometers test temperatures of frying fats and sugar syrups. They read up to 400°F.
- Special thermometers are used to test the accuracy of oven, refrigerator, and freezer thermostats.

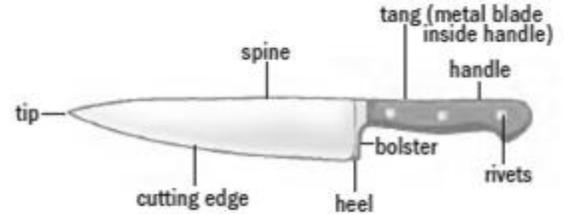


3.5.4 Hand Tools

Chef's knives and other knives have a number of parts, and you should be familiar with their names. These parts are illustrated in the diagram. The spine is the back of the blade. It is the edge opposite the cutting edge. The tip is the pointed end of the blade, while the heel is the back end of the blade closest to the handle. On some knives, the blade has a



raised part called a bolster at the heel end. The bolster is a sort of guard that helps protect the hand from slips and also helps balance the weight of the knife. The tang is the portion of the metal blade inside the handle. The highest-quality, most durable knives have a full tang, which means the tang runs the full length of the handle. On knives with traditional wood handles, rivets hold the handle to the tang. The rivets should be perfectly smooth and flush with the handle. Composite molded handles are bonded to the tang without rivets.



The parts of a chef's knife

VARIOUS KNIVES AND THEIR USES

French knife or chef's knife: Most frequently used knife in the kitchen, for general-purpose chopping, slicing, dicing, and so on. The blade is wide at the heel and tapers to a point. Blade length of 10 inches (260 mm) is most popular for general work. Larger knives are for heavy cutting and chopping. Smaller blades are for more delicate work. This is your most important tool, so you must learn to handle it and care for it well.

Santoku knife or Japanese cook's knife: A wide-bladed knife that is becoming increasingly popular as a substitute for the traditional chef's knife. Blades are usually 5 inches (13 cm) or 7 inches (18 cm) long.

Utility knife or salad knife: A narrow, pointed knife 6-8 inches (160-200 mm) long. Used mostly for pantry work, cutting and preparing lettuce, fruits, and so on. Also useful for carving roast chicken and duck.

Paring knife: A small pointed blade 2-4 inches (50-100 mm) long. Used for trimming and paring vegetables and fruits.

Boning knife: A thin, pointed blade about 6 inches (160 mm) long. Used for boning raw meats and poultry. Stiff blades are used for heavier work. Flexible blades are used for lighter work and for filleting fish.

Rubber spatula or scraper: A broad, flexible rubber or plastic tip on a long handle. Used to scrape bowls and pans. Also used for folding in egg foams and whipped cream.

Pie server: A wedge-shaped offset spatula. Used for lifting pie wedges from pan.

Bench scraper or dough knife: A broad, stiff piece of metal with a wooden handle on one edge. Used to cut pieces of dough and to scrape workbenches.

Pastry wheel or wheel knife: A round, rotating blade on a handle. Used for cutting rolled-out doughs and pastry and baked pizza.

Spoons: slotted, perforated, and solid: Large stainless-steel spoons that hold about 3 ounces (90 mL). Used for stirring, mixing, and serving. Slotted and perforated spoons are used when liquid must be drained from solids.

China cap: A cone-shaped strainer. Used for straining stocks, soups, sauces, and other liquids. Pointed shape allows the cook to drain liquids through a relatively small opening.

Fine china cap or chinois (shee-nwah): A china cap with very fine mesh. Used when great clarity or smoothness is required in a liquid.

Strainer: A round-bottomed, cup-shaped tool made of screentype mesh or perforated metal. Used for straining pasta, vegetables, and so on.

Drum sieve or Tamis: A screen-type mesh supported in a round metal frame. Used for sifting flour and other dry ingredients and for puréeing soft foods.

Pastry bag and tubes: Cone-shaped cloths or plastic bags with an open end that can be fitted with metal tubes or tips of various shapes and sizes. Used for shaping and decorating with items such as cake icing, whipped cream, duchesse potatoes, and soft dough. Pastry brush: Used to brush items with egg wash, glaze, etc.

Can opener: Heavy-duty can openers are mounted on the edge of the workbench. They must be carefully cleaned and sanitized every day to prevent contamination of foods. Replace worn blades, which can leave metal shavings in the food.

3.5.5 Sinks

Different materials are used for sinks according to the purpose for which they are intended:

- Heavy galvanized iron for heavy pot wash.
- Teak or other hard wood for glass or china wash. (If hard wood sinks are left unused for long periods of time, they should be filled with cold water to prevent shrinkage of the timber.)
- Stainless steel for general purposes.
- Glazed earthenware for general light purposes. Sinks, drainers, waste and overflow outlets should be cleaned with a suitable abrasive power cleaner, thoroughly rinsed with plenty of clean water and left to dry.



3.5.6 Tables

Wooden tables should be scrubbed clean with hot soda water, rinsed and wiped dry as soon as possible to prevent warping. Formica or Stainless steel topped tables should be washed with hot detergent water, rinsed with hot water and dried. Marble Slabs should be scrubbed with hot water and rinsed. All excess moisture should be removed with a dry cloth. No cutting or chopping should be allowed on table-tops; chopping boards must be used. Hot pans must not be placed upon tables; triangles must be used to protect the table-tops. The legs and racks or shelves of tables are cleaned with hot detergent water and then dried. Wooden table legs require scrubbing.



3.6 Summary

Thorough knowledge of equipment is essential for success in the kitchen. Few food-service operations depend on nothing more than a range and an oven, an assortment of pots and pans, and knives and other hand tools. Modern technology continues to develop more and more specialized and technically advanced tools to reduce kitchen labor. Much of this equipment is so complex or so sophisticated that only firsthand instruction and practice will teach you how to operate it effectively and safely. Other items, especially hand tools, are simple and need no explanation but require much practice to develop good manual skills. A vast array of specialized equipment is available for today's kitchens. It would take a large book, not just a short chapter, to describe all of the many items you will encounter in your career items such as pasta machines, crêpe machines, burger formers, breading machines, cookie droppers, beverage machines, Greek gyro broilers, doughnut glazers, conveyor fryers, and so on. In this technological age, nearly every year brings new tools to simplify various tasks.

3.7 Answer to Check Your Progress

Check Your Progress-I

- Q.1 Please refer section 3.3.1
- Q.2 Please refer section 3.3.7
- Q.3 Please refer section 3.3.4
- Q.4 Please refer section 3.3.3
- Q.5 Please refer section 3.3.8

Check Your Progress-II

- Q.1 Please refer section 3.4.3
Q.2 Please refer section 3.4.2
Q.3 Please refer section 3.4.4
Q.4 Please refer section 3.4.5
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3.8 References/Bibliography

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 2. P S Bali, Food Production Operations, Oxford University Press, New Delhi
 3. Wayne Gisslen, Professional cooking, John Wiley & Sons
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3.9 TERMINAL QUESTIONS

Q.1 Write short notes on:

- Large equipments used in kitchen
- Mechanical Equipment used in kitchen
- Utensils and small equipments used in kitchen

UNIT 04: FRENCH CLASSICAL MENU, ACCOMPANIMENTS AND GARNISHES

Structure

- 4.1 Objectives
- 4.2 Introduction
- 4.3 Origin of Menu
- Check your Progress-I
- 4.4 French Classical Menu Sequence
 - 4.4.1 Hors-d'oeuvres
 - 4.4.2 Potages (Soups)
 - 4.4.3 Oeufs (Egg Dish)
 - 4.4.4 Farineux (Pasta and Rice)
 - 4.4.5 Poisson (Fish)
 - 4.4.6 Entrée (Main Course)
 - 4.4.7 Sorbet (Rest Course)
 - 4.4.8 Relevé
 - 4.4.9 Rôti (Roast)
 - 4.4.10 Légumes (Vegetables)
 - 4.4.11 Salade (Salad)
 - 4.4.12 Buffet Froid (Cold Buffet)
 - 4.4.13 Fromage (Cheese)
 - 4.4.14 Entremets (Sweets)
 - 4.4.15 Savoureux (Savoury)
 - 4.4.16 Dessert (Fruits)
 - 4.4.17 Beverages (Tea/Café)
- Check your Progress-II
- 4.5 Accompaniments
- 4.6 Garnishes
- Check your Progress-III
- 4.7 Summary
- 4.8 Answer to check your progress
- 4.9 References/Bibliography
- 4.10 Terminal Questions

4.1 Objectives

After reading this unit the learner will:

- Have knowledge about the French Classical Menu.
- Have knowledge about the various dishes served in the French Classical Menu.
- Know about various accompaniments and garnishes

4.2 Introduction

The classical French Menu was originated from France and contains seventeen courses served in classical format or order of dishes. This format is used to lay out menus as well as to indicate the order of the various courses. The actual

number of courses on a menu and dishes within each course depend on the size and class of the establishment, the structure of the French, Classical Menu is followed even for modern shorter menus. Nowadays a full French Classical Menu is rarely served except as special dinner or banquet menu.

In this unit you will read about the French Classical Menu, the various kinds of dishes in each course. The general procedure is to have 4 to 5 courses for lunch and 5 to 6 courses for dinner altogether making up the French Classical Menu, each course having a wide choice. These form of menu shows the true art of menu compilation, where balance must be perfect throughout the courses especially with regard to nutritional value, method of cooking garnishing etc.

After reading this unit you will understand the usefulness of the various courses and the dishes that goes in that particular course and as the time went the courses were also shortened due to lack of time and appetite. The French Classical Menu and the French terms were the backbone of the culinary industry.

4.3 Origin of Menu

The word "menu," like much of the terminology of cuisine, is French in origin. It ultimately derives from Latin "minutus," something made small; in French it came to be applied to a detailed list or résumé of any kind. The original menus that offered consumers choices were prepared on a small chalkboard, in French a carte; so foods chosen from a bill of fare are described as "à la carte," "according to the board." It is also known as bill of fare. The word "menu" dates back to the eighteenth century, although the custom of making a list of courses for a meal is much older. The bill of fare was originally very large and was placed at the end of the table for everyone to read. As time progressed the menu became smaller in size and number of copies was made which allowed individuals to read their own copies.

The original European restaurants did not have menus in the modern sense; these table d'hôte establishments served dishes that were chosen by the chef or proprietors, and those who arrived ate what the house was serving that day, as in contemporary banquets or buffets. In Europe, the contemporary menu first appeared in the second half of the eighteenth century. Here, instead of eating what was being served from a common table, restaurants allowed diners to choose from a list of unseen dishes, which were produced to order according to the customer's choice. A table d'hôte establishment charged its customers a fixed price; the menu allowed customers to spend as much or as little money as they chose.

CHECK YOUR PROGRESS-I

Q.1 Define menu?

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Q.2 What is the English equivalent for French term 'menu'?

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4.4 French Classical Menu

Menu is virtually a list of dishes planned for production in a catering operation and may include full meals or snacks

TYPES OF MENUS

1. A la' Carte Menu: It is basically a choice menu and generally offers choices of dishes or items to customers in a sequence i.e., from starters to desserts. Each dish is priced separately so that a choice can be made according to the customer's appetite, mood and pocket.

Kêu riêng từng món - a la carte -

* Có rau sống, bánh tráng, bún, mắm chấm

Items below include fresh lettuce plate, rice paper, vermicelli noodles & dipping sauce

01. GỎI CÁ SỐNG * (Fresh fish salad)	9.99	01. GỎI BÒ (Beef salad)	9.99
02. GỎI CUỐN CÁ (3) (Fish spring rolls)	3.95	02. BÒ XAY NƯỚNG (8) * (Charbroiled beef patties)	9.99
03. CÁ CHIÊN DÒN MẮM ME (8) * (Fried fish strips w/tamarind sauce)	9.99	03. BÒ XỐ XĂU (5) * (Beef on a stick)	9.99
04. CHẢ GIÒ CÁ (5) * (Fish egg rolls)	9.99	04. BÒ ĐÚM * (Steamed seasoned ground beef)	9.99
05. CÁ MỠ CHÀI (5) * (Wrapped BBO fish)	9.99	05. BÒ LÁ LỐT (8) * (Beef wrapped in Hawaiian lot leaf)	9.99
06. CÁ LÁ LỐT (5) * (Fish wrapped in Hawaiian lot leaf)	9.99	06. BÒ MỠ CHÀI (8) * (Wrapped BBO fish)	9.99
07. CÁ NƯỚNG VĨ SẮT * (Fish fillet on sizzling hot plate)	10.99	07. BÒ NƯỚNG VĨ * (Grilled beef)	14.99
08. CHÁO CÁ (Fish porridge)	3.00 - 5.50 - 7.50	08. BÒ NHÙNG DẮM * (Beef fondue)	14.99
09. CHẢ CÁ HÀ NỘI * (Fish on hot plate 'Ha Noi' style)	11.99	--- thêm đĩa thịt bò (extra beef for grilling or fondue)	5.99 - 9.99
10. CHẢ CÁ THĂNG LONG * (Table-grilled fish fillet w/shrimp sauce)	11.99	09. BÒ LÁ LỐT (4) & MỠ CHÀI (4) * (Beef lot leaf & Wrapped BBO beef)	9.99
		10. CHÁO BÒ BẮM (Ground beef porridge)	3.00 - 5.50 - 7.50

Figure 4.1 Sample A la' Carte Menu

2. Table d'hôte Menu: It is referred as a set menu, in which a number of dishes are planned and offered at a set price, e.g. Thali meals on railways, tray meals on airlines, etc.



Figure 4.2 Sample Table d'hôte Menu

The sequence of the Classical French Menu is as follows:

- | | |
|-------------------|------------------------|
| 1. Horsd' Oeuvres | : Appetiser |
| 2. Potage | : Soup |
| 3. Oeuf | : Egg |
| 4. Farineux | : Pasta and Rice |
| 5. Poisson | : Fish |
| 6. Entrée | : First meat course |
| 7. Sorbet | : Rest course |
| 8. Releve | : Main meat course |
| 9. Rôast or Rôti | : Roasted game/poultry |
| 10. Légumes | : Vegetables |

11. Salade	: Salad
12. Buffet Froid	: Cold Buffet
13. Fromage	: Cheese
14. Entremet	: Sweet course
15. Savoureux	: Savoury
16. Dessert	: Fruits (fresh or dry)
17. Café/Tea	: Tea or Coffee

The French Classical Menu offers sweeten courses to the guest. Nowadays it is common for many establishments to offer a shorter version of the classical menu which is limited to fourteen/eleven courses but even in this shorter version the structure of the original menu is followed as far as far as succession of courses is concerned. It is however quite common for some establishments to offer savourex course before the entremets (sweet) course.

4.4.1 Hors-D'oeuvres

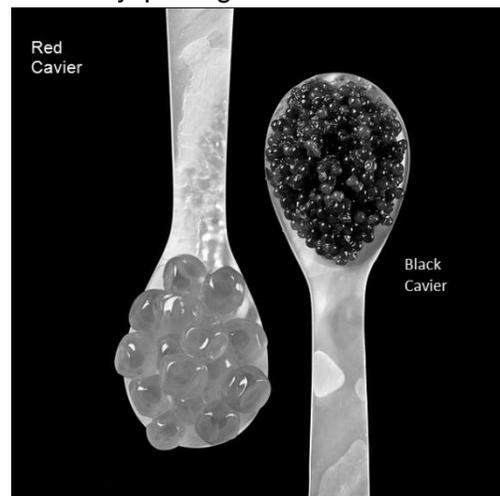
Hors-d'oeuvre literally "apart from the main work", also known as appetizers, starters, or the first courses, are food items served before the main courses of a meal. The French (singular and plural) is hors d'oeuvre; in English, the oe ligature is usually replaced by the digraph "oe" with the plural often written as "hors d'oeuvres" and pronounced. There are several related terms, such as a one-bite appetizer, as an amuse-bouche. Some of the common served starters are as under:

CAVIAR

Sturgeon's eggs that have been salted and allowed to mature is known as Caviar. Charles Ritz formally launched caviar by putting it on the menu of his hotel. The sturgeon lives in the sea but returns in winter to small streams to lay its eggs. The eggs constitute about 10% female's body weight. After they have been removed they are washed, sieved, put into brine, drained and finally packed into tins. There are two sorts of caviar: caviar in grains and pressed caviar.

Types of caviar

Sold fresh and sometimes pasteurized, there are three types, differentiated by size, colour, and species of sturgeon.



Beluga: Most expensive and produced by the largest species. Eggs dark grey in colour, firm, heavy and well separated. If they burst caviar becomes heavy.

Ossetra: Smaller and more even grains. Golden yellow to brown and quite oily.
Sevruga: Produced by small sturgeons, light to dark grey eggs. This is the cheapest type.

Pressed caviar: This is made from the ripest eggs taken towards the end of the fishing season which are then compressed. About 5k.g. fresh caviar are needed to make 1 kg pressed caviar. It has a strong and oily taste and is sometimes considered too salty. Caviar is semi- conserve and perishables. It should be kept between -20 C to +40 C. It should be served cold but not frozen, preferably on crushed ice: take the tin out of the fridge an hour before serving. Lightly buttered toasts make an ideal accompaniment. Caviar has a calorific value of 140 calories per 100 gm. It is rich in phosphorous and a good source of protein.

FOIE GRAS

Goose liver which is enlarged by methodically fattening the bird. Each liver weighs 700-900 Gms for geese & 300-400 Gms. for ducks. Foie gras is available in four forms



Raw Foie gras (Foie gras cru): Increasingly in demand is sold during the holiday season at the end of the year. It must be well lobed, smooth & round, not too large. Its preparation must be

meticulous. Fresh Foie gras (Foie gras frais): Can be purchased cooked from a delicatessen, usually in pots. It will keep at the most for a week covered in the refrigerator. Semi-cooked pasteurized Foie gras (Foie gras mi-cuit pasteurizes): In cans it will keep for 3 months in the refrigerator once opened. It retains the taste of fresh Foie gras quite well. The best quality must have a perfect consistency, aroma & flavour. Preserved Foie Gras (Foie Gras de conserve): In jars is the most traditional preparation. Sterilized and persevered in its own fat, it will keep for years in a cool, dark, dry place and improves like wine.

Preparation of Raw Foie Gras:

Carefully remove all the tubes and skins with the point of a thin bladed knife.

- Make an incision in each lobe and pull on the vein using a knife, Season the lobes with salt and pepper.
- Close each lobe wrapping it tightly in muslin and refrigerate it overnight.
- Next day place the liver in terrine, cover it with goose fat and poach it.
- When it is cooked, cool and drains the liver on the wire cooling tray and refrigerate for 24 hrs.
- Serve the Foie gras cold.

The taste of liver can be enhanced by marinating it for 48 hrs in port mixed with 10% Armagnac

CANAPÉS

A slice of bread cut into various shapes and garnished. Cold canapés are served at buffets or lunches or with cocktails or aperitifs; hot canapés are served as entrees or used as foundations for various dishes. When served with game birds,

canapés are generally fried in butter and spread with a gratin forcemeat, a puree made of the internal organs of the bird (cooked undrawn) or Foie gras.

Recipes

Preparation of canapés (preparation des canapés) unlike sandwiches, which consist of 2 slices of bread with a filling in the middle, canapés are made with a single slice of bread; they may be rectangular, round, or triangular in shape and the bread can also be lightly toasted. Cold canapés are usually made from white bread (slightly stale, so that it does not crumble, and with the crust removed) or rye bread; hot canapés are made from white or whole meal bread. Cold canapés



Vol-au-vent

should be served as soon as possible after preparation so they do not dry out. They may be stored in a cool place covered with a cloth (a damp cloth if kept in a hot or dry place). There is a wide variety of garnishes for canapés, including all the garnishes indicated for croustilles as well as various flavoured butters, spinach mixed with béchamel sauce and Parmesan (à la Florentine), ham, scrambled eggs with cheese, sardines (fresh sardine fillets or puree of sardines in oil hard boiled (hard cooked) egg and English mustard etc.

COLD CANAPÉS

Canapés with asparagus (canapés aux asperges) spread some thickened mayonnaise on rectangular slices of bread. Arrange very small asparagus tips on each canapé and 'tie' each bunch with a thin strip of green or red sweet pepper.

Canapés with smoked salmon (canapés au saumon fumé) Butter some slices of bread and garnish with slices of smoked salmon cut to the exact size of the bread. Garnish each canapé with half a slice of fluted lemon.

HOT CANAPÉS

Canapés with cheese (canapés au fromage) Butter some slices of bread. Top with a thick layer of Gruyere cheese either grated or cut into very thin strips. Brown in a hot oven. The canapés may be served with seasoned tomato sauce. Alternatively, grated Gruyere can be added to a wellreduced béchamel sauce, seasoned with cayenne, and spread over the slices of bread, which are then sprinkled with grated Gruyere or small cubes of Gruyere and browned in a very hot oven.

Canapés with mushrooms (canapés aux champignons) prepare a dry well-browned duxelles of mushrooms and add béchamel sauce (1 part to 3 parts duxelles). Spread this on lightly toasted slices of bread and sprinkle with fresh breadcrumbs and a sprinkle with fresh breadcrumbs and a little melted butter. Brown in a very hot oven.

SALAD

A dish of raw or cold cooked foods, usually dressed or seasoned, served as an hors d'oeuvres.

Salads are classified into three main categories:

Green salads : Consists of green-leaved raw vegetables, such as lettuce, endive, chicory, watercress, dandelion leaves, arugula, etc. These salads which are served as hors d'oeuvres are usually dressed with vinaigrette which can be flavoured and mixed with croutons, strips of bacon, cheese, shallots, garlic, etc.

Plain salads: Consists of basic ingredient, either raw or cooked, but always served cold with a cold dressing (mayonnaise, vinaigrette, mustard, cheese dressing etc) the basic ingredient can be vegetable, meat or fish.

Mixed salads: Are more elaborate dishes combining various ingredients of contrasting flavours, textures and colours. Mixed salads can include exotic ingredients, such as truffle, foie gras, lobsters, etc. the accompanying dressing should blend with the flavour of the ingredients. Mixed salads are served as starters, but can also accompany roast meats.

Alienor Salad

(salade alienor): Mix 2 tablespoons grated horseradish and enough fresh cream to give a smooth sauce with a strong flavour. Trim 2 smoked trout and remove the fillets, taking out all the bones. Cover 4 plates with lettuce. Cut a large stoned (pitted) avocado into thin



Salad Platter

slices; arrange the slices on the plates and sprinkle them with lemon juice. Arrange 2 fillets of trout, coarsely shredded, on each plate. Coat with horseradish sauce. Sprinkle with a few shredded almonds and complete with slices of gherkin. The avocado may be replaced by pickled red cabbage.

American Salad (salade americaine): Line some individual salad bowls with lettuce leaves. For each serving, mix together 1 tablespoon diced pineapple, 2 tablespoons (3 tablespoons) sweetcorn, either canned or cooked in boiling water, 1 tablespoon julienne of chicken breast poached in white stock, and 1 tablespoon peeled, seeded and diced cucumber. Dress with 2 tablespoons (3 tablespoons) vinaigrette flavoured with tomato ketchup and pile up in the bowls. Garnish each bowl with quarters of hard-boiled (hard-cooked) egg and a small tomato cut to resemble a flower.

Carrot Salad with Orange (salade de carottes à l'orange): Put 500 g (18 oz, 4¾ cups) peeled and grated carrots in a pile in a salad bowl. Remove the peel

and pith from 4 oranges and dice the flesh finely. Peel and thinly slice 2 large mild onions and break the slices up into rings. Pour some lemon vinaigrette over the carrots just before serving, and add the orange dice. Toss and garnish with the onion rings.

Port-Royal Salad (salade port-royal): Mix together slices of boiled potato, chopped cooked French (green) beans, and slices of peeled apples lightly sprinkled with lemon juice. Add some mayonnaise to this mixture. Heap up in a salad bowl, pour over some more mayonnaise and garnish with whole French beans in a star shape. Surround with small lettuce hearts and quarters of hard-boiled (hardcooked) eggs.

New Turnip Salad (salade de petits navets nouveaux): Peel and quarter 1 kg (2¼ lb) small new turnips. Blanch them for 6 minutes in boiling water, drain, and then cook in stock, preferably chicken stock, for about 10 minutes. Drain and leave to cool, and then sprinkle with chopped herbs. Add some strips of smoked haddock poached in milk (1 part haddock to 2 parts turnips) and dress with olive oil and vinegar.

HORSOEUVRES COCKTAILS

Some of the Horsoeuvres Cocktails are as under:

CRAB COCKTAIL

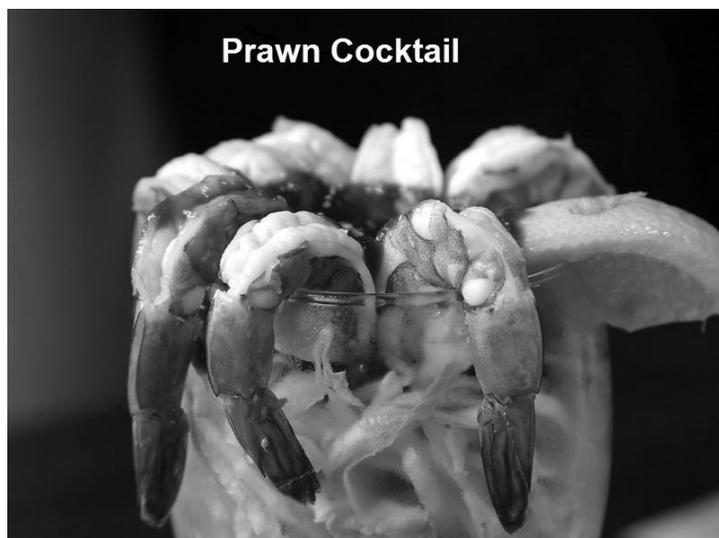
- Take 400gm canned crab meat

Preparation of sauce

- Cook 3 finely chopped shallots with white wine and reduces completely.
- Add shallots to mayonnaise prepared out of one egg yolk, ¼ lt. oil, 1 tbsp strong mustard, 1 tbsp vinegar
- Blend in 1 tbsp tomato puree and 1 tbsp chopped tarragon
- Season to taste with salt, pepper and cayenne
- Can be flavoured with cognac
- Mix sauce with crab meat
- Place some shredded lettuce seasoned with vinaigrette in 4 sundae glasses
- Chill and serve, sprinkle finely chopped tarragon leaves

Prawn Cocktail

Same procedure but garnished with quarters of tomato and slices of hard boiled eggs.



4.4.2 Potages (Soups)

Potage or soup is a liquid food consisting of meat, seafood vegetables, cereals or poultry. They play an important role in the menu and when there is no appetizer the soup takes its place as the first course. It should therefore be easy to assimilate, attractive and have the ability to prepare appetite for the coming heavy and solid food. Soups may be derided into different categories i.e. Thin Thick, Cold and International soups.

THIN SOUPS may be passed (Consomme) or unpassed (Broths, Bouillon). Clear soups are written first followed by thick soups. If a menu contains two soups, one must be clear and the other thick. If only one soup is to be served, it may be either clear or thick. Usually soups are served piping hot but some soups may also be served cold and clear soups can be served in jellied form.

THICK SOUPS :Under this category are purees, cream, veloute, bisque and chowders. Cold soup served cold during the summers eg. Vichyssoise Gazpacho

INTERNATIONAL SOUPS : These are national soups of a country famous all over the world eg. Minestrone (Italy), Petit Marmite (Prance), Mulligatawny (India), Clam Chowder (America), Green Turtle Soup (England).

SERVICE OF SOUP

Thin Soup : A variety of bowls, containers or cups may be used for the service of soup but one important point to be taken care of is that hot soup must be served piping hot. Once poured into the guest cup it must not be heated or the cream will split, crisp garnish will get spoilt and a thick layer of starch will develop on top. The soup bowl should always be kept hot before pouring the soup. Lighter the soup deeper the bowl hence thin soup like consommé are served in ceramic consommé cup with this handles so that the guest may sip the soup from the cup.



Thick Soup : These soups are consumed from a soup plate available in different designs as these thick starchy soups take a long time to cool. The soup plate helps in displaying the colour and the variety of garnishes used. It also helps in cooling the soup thus preventing burning of tongue accidentally.

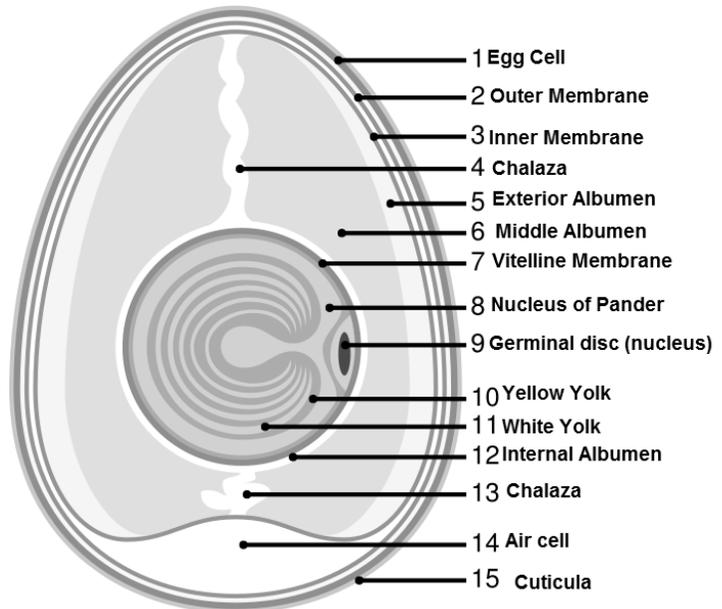
Accompaniments and Garnishes of Soups:

- Diced bread croutons and sliced bread stripes are served as an accompaniment with puree and tomato soup.
- Vegetable garnishes are added to clear, cream and veloute soup. Parmesan cheese straws are served as accompaniment with Turtle soup and St. Germain.
- Slices of poached beef marrow are served with some bouillon as garnish.

- Sprigs of chervil are added to Consommé and Broth type soups.

4.4.3 Oeufs (Egg Dish)

Word egg is used for hen's egg, in other cases it should be mentioned for e.g. duck's egg, quail's egg. Ostrich and crocodile eggs are some exotic rarities. The weight of hen's egg-60gms which contains 58% is albumen, 30% is yolk, and 12% is shell. Albumen-water, proteins, minerals. Yolk-albumins, fats, vitamins, proteins. The Calorific value of egg is 76 cal/ 100gm.



It is easy to digest unless heavily garnished- foie gras, truffles, or cooked in fat. Oeuf or Egg as a separate course has limited appeal in the modern menu except during the breakfast. The different egg preparation styles are boiled (hard/soft), omelets en cocotte (cooked in a small fire proof dish), scrambled, sur le plate (baked/served in same dish), poached.

Dishes Prepared From Eggs

Oeuf Sur Le Plat: Sur le plat is small white earthenware or metal dish with ears on which egg is placed and baked in the oven. Presented on an under plate with sweet spoon and fork, side knife incase of garnish.

Oeuf En Cocotte: Egg in shell, usually half-boiled placed on an egg cup eaten with a tea spoon.

Omelette : Served on hot fish plate with joint fork placed on the right side of the cover.

Omelets Bonne Femme : An omelet with dices of bacon, minced mushrooms and slices of onion tossed in butter.

Omelet Espagnole (Spanish Omelette) : An flat omelet, fluffy with minced onions cooked in butter, dices of tomatoes, diced red pepper



Egg Custard (Oeuf Au Lait): Sweetened boiling milk is poured onto lightly beaten eggs, cooked in the oven in the bain-marie. Served cold usually in the dessert course.

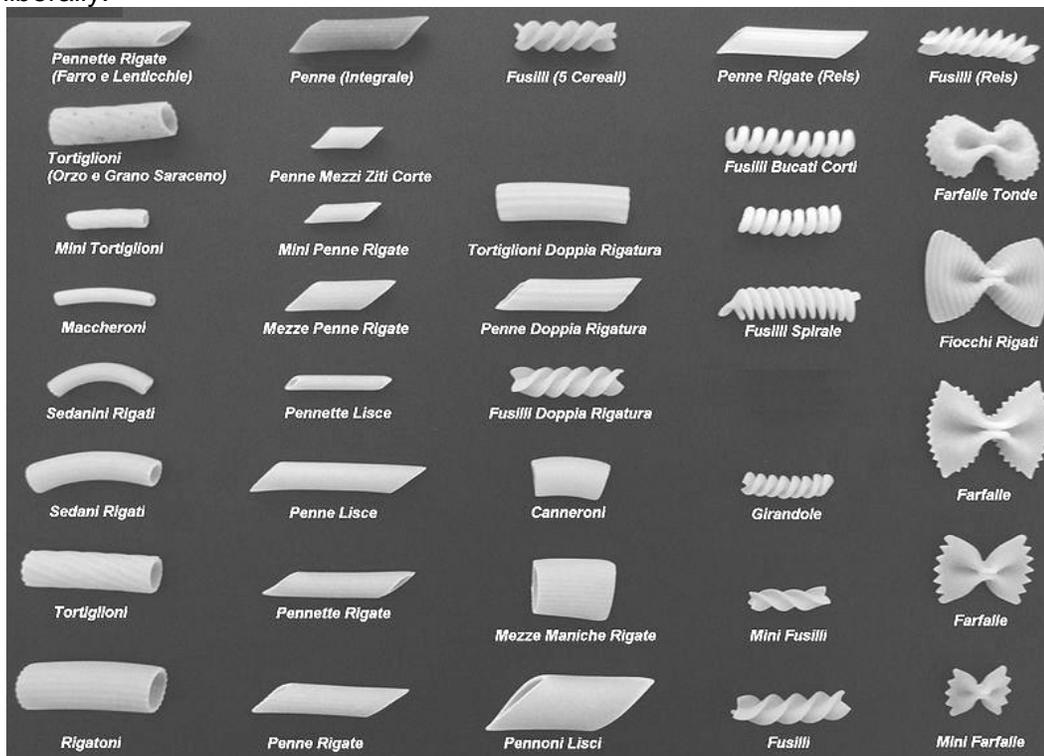
- Scrambled eggs with mushroom, liver, shrimps, smoked salmon.
- Fried egg with ham.

4.4.4 Farineux (Pasta and Rice)

Commonly referred to as farinaceous or Pasta dishes such as spaghetti, macroni, ravioli, penne, farfalle, vermicelli etc. These are of Italian origin and one made of durum wheat, semolina, water and egg. These are available in various shapes and designs and may be handmade or machine made.

Pasta should never be over cooked or allowed to have carry over cooking which makes them cling to one another. On the other hand they should be slightly under cooked so that they are a little hard to bite (Al dente).

Pasta may be stuffed with a filling of minced meat, spinach, chicken, liver, herbs etc. Italian cheese i.e. Parmesan, Gorgonzola, Riccota, Pecorino are used liberally.



VARIETIES OF PASTAS

Pasta can be grouped according to its uses

1. Those that can be stuffed, such as ravioli, agnolotti, cannaroni.
2. Those that are flat, such as lasagna
3. Strings such spaghetti
4. Spiral shaped such as macaroni and fusilli

Another classification is on the basis of uses, for e.g.

1. Pasta for soup - risoni
2. Pasta for boiling- macaroni , spaghetti
3. Pasta for baking- first boiled in water- lasagna
4. Filled pasta- cannelloni, ravioli

Pasta should be cooked until it is firm and not soft and mushy. Adding a teaspoon of oil to the cooking water with help prevent pasta from sticking together when drained. Pasta can be served with a salad or with a sauce or can be filled with various fillings. Bolognaise and milanaise are the traditional sauces.

4.4.5 Poisson (Fish)

This refers to fish course which is commonly included in a dinner or buffet menu. Fish is a good source of protein.



Calcium, phosphorus, unsaturated fatty acids as well as a rich source of vitamin A, D, E & K. Fish contains the same proportions of protein as meat but nutritive value of 500 gms of fish is generally regarded to be equal to that of 300 gms of meat. It contains significant amount of vitamins, phosphorus and iodine. The water content of all fish is much the same. The alluminoids constitute about 18%. The fat contains less nitrogenous substance than other meats and is easily digestible therefore it is good for ladies and children. Both fresh water fish such as Salmon, Trout, Eel, Sole, Rohu and sea water fish i.e. Cod, Sardine, Herring, Haddock, Mackerel are grilled, fried, baked or poached and served with appropriate garnish, sauce and accompaniments. Shell fish such as lobster, Prawn, crab, shrimp, snails, oysters find a prominent place in the menu and are patronized by the elite class. Most of these sea food require special service, equipment and trained hotel staff for its preparation and service. These may be served as an Horsd'oewre or as Poisson.

Fish is subjected to speedy decay therefore one should be very careful as far as freshness is concerned. The predominant smell of fish can be diminished by adding a little vinegar or white wine to the poaching stock or court bouillon. The fish is kept at a temperature of -180C and thawed at 70C.

FISH DISHES

Fish a'l'orly: Fish which may be filleted or whole according to size, dipped in batter or egg and breadcrumbs, then fried, drained. Accompaniments - tomato sauce

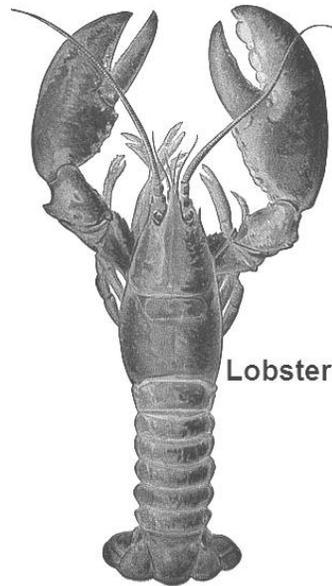
Fish a'l'anglaise: Cut slices season with salt and pepper and dredge in flour. Dip in beaten egg and oil, cover with white breadcrumbs, and fry in butter, golden brown both the sides.

Accompaniments- Tartare sauce, mayonnaise sauce and lemon.

Grilled herring: Clean and trim medium-sized herring, brush with oil or butter, season with pepper, cook under a moderate grill. Sprinkle with salt. Accompaniment- melted butter and mustard sauce

Mussels (poor man's oysters) mussel a'l'mariniere: Remove shells, cook and leave to cool. Marinate for 30 min in olive oil, lemon juice, chopped parsley and pepper. Dip in batter and cook in oil. Drain on absorbent paper. Accompaniment- brown bread, butter and cayenne pepper.

Lobster (homard): Cooked in various ways. Accompaniment- lemon and mayonnaise



4.4.6 Entrée (Main Course)

Entry to the main course starts after the fish course and preceding the roast. It can be a hot or a cold dish in a sauce or gravy. When more than one entrée is served they must be clearly differentiated- meat entrée, offal entrée, vegetable entrée. Various items can be served in entrée for e.g. **meat, fish, vegetables, pastas, timbales, Noisette, tournedos, vol-au-vent.**

Timbales - mould in which a pastry is made and baked and filled with several fillings.

Noisette- small round steak usually of lamb and mutton, cut from the rib or loin. Fried in butter and served with variety of garnishes including potatoes, fried onions and sautéed herbs.

Tournedos- small round slice 2cm thick taken from the fillet of a beef, sautéed, grilled. Served garnished and with sauces.

Vol-au-vent- round case of puff pastry 15-20cm in diameter having a pastry lid filled with different fillings and sauces.

4.4.7 Sorbet (Rest Course)

Type of water ice served in the middle of the meal. Softer and more granular than ice-cream. Sorbet is derived from the Italian word 'Sorbetto' which is derived from Turkish word 'Chorbet' which in turn is derived from an Arabic word 'Charab' which means drink. It may be served as a dessert or between meals to refresh the palate. Basic ingredients of a sorbet are fruit juice, puree, wine, spirit, and liqueur. Sugar syrup may also be added. Russian and Jamaican cigarette and cigars is also served in this course. Sorbets are usually served in a Sundae dish or tall cocktail glasses. Example of a sorbet: PEAR SORBET

- Peel the pears and dice the pieces
- Sprinkle lemon juice
- Reduce to fine puree in a blender & add sugar
- Pour the puree into ice-cream maker, until the sorbet freezes
- Put the container into freezer or serve immediately in a well decorated sundae dish or a cocktail glass

4.4.8 Relevé

This is the second meat course/main course. It is larger than entrée course and takes the form of butcher's joint/meat which has to be carved eg. Joint of lamb, mutton or pork, rib of beef. Roasting, Braising or spit roasting of large pieces of meat is carried out and the meat served with various accompaniments, garnishes and sauces. The compliments are vegetables and potatoes.

Menu Example :

- Cole de Porc Charcutiere
- Navarin de Meuton Printanier
- Escalope de Veau Cordon Bleu
- Chateaubriand Steak
- Beef Stroganoff
- Poulet Saute Chasseur
- Poulet Saute Hongraise
- Poulet Cordon Bleu
- Lancashire Hot Pot
- Beef Steak a' la Americaine

4.4.9 Rôti (Roast)

This course comprises of game or poultry. Roast is served with its own sauce along with potatoes and vegetables. Game birds like wild duck, wild goose, pheasant, quail, turkey, partridge are roasted in a oven to allow the succulent juice and fine flavour to be retained in the flesh. Basting is done at regular intervals to prevent the outer layer from becoming hard and dry. Often these game birds are stuffed and trussed before being roasted. If served as main course the meat is served in a large plate along with large knife and large fork.

Menu Example :

- Canenton Roti
- Oie Roti
- Dinde Roti
- Becasse Roti
- Conard Savage Roti
- Roast/Roti is



usually served pre-plated garnishes with a variety of accompaniments.

4.4.10 Légumes (Vegetables)

At this stage the balance of meal is gradually returning from heavy to light so vegetable dishes such as asparagus, artichoke, corn on the cob, brocili,



mushrooms, bamboo shoots are served with their accompanying sauces. These are usually eaten with fingers and so a finger bowl is provided after service. The vegetables are either boiled or steamed, cream, butter or hollandaise's sauce added and served decorated with fancy cut vegetables. It is served cold or hot depending upon the dish. If artichoke and asparagus are served cold vinegrette or mayonnaise is served as accompaniment. If served hot Beurre Noisette or Hollandaise is served. An inverted fork is put below the plate so as to allow accumulation of sauce at the tips.

Menu Example :

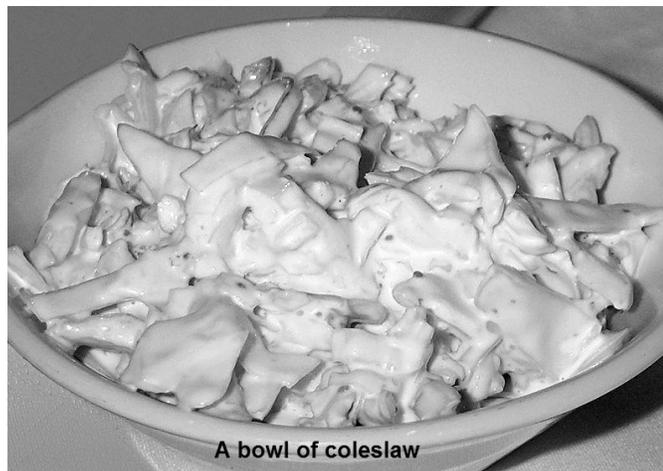
- Corn on the Cob (Mis Natural)
- Pomme au four
- Tomate Farcis
- Champignons au beurge fondu

4.4.11 Salade (Salad)

These of two types

- Simple salad
- Compound Salad.

It consists of food items such as green vegetables fruits, cold food item, hot mixture of piquent foods, chopped food in aspic, coleslaw, potato or meat served with a garnish. Salads may be served in small quantities as an Horsd' oeuvre, as an



accompaniment to Entrée or as a separate course of its own. Salad should possess freshness and stimulating flavour. It should be cold, crisp, piquent colourful, well seasoned and attractive.

Simple Salad: These may be divided into green salad made up of green leaf ingredient or vegetable salad made up of one main vegetable which will dominate the overall flavour of the dish.

Compound Salads: These are elaborate salads consisting of more than one ingredient. They may be divided into the following :

1. Fish based
2. Vegetable based
3. Poultry, Game or Meat based
4. Fruit based

Menu Example :

- Salad Verte
- Salad Francaise
- Salade Russe
- Salade Japonnaise
- Salade Waldrof

4.4.12 Buffet Froid (Cold Buffet)

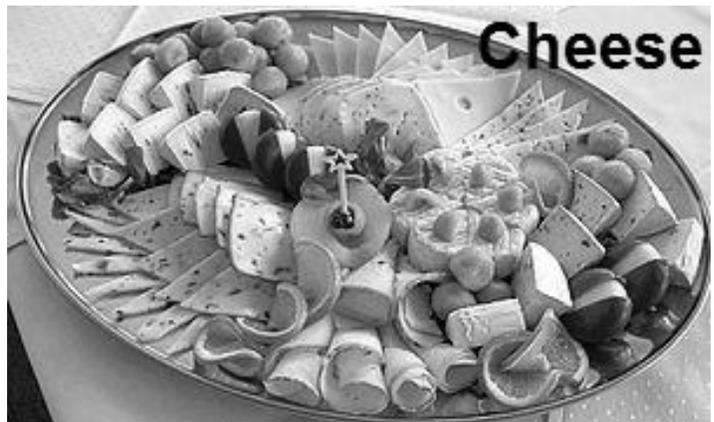
This course includes a variety of cold meats and fish along with assortment of pate work placed on a large mirror/attractive bowl displayed at an prominent place.

Menu Example :

- Cote de boeuf
- Jambon

4.4.13 Fromage (Cheese)

Cheese was discovered by a shepherd who used to carry milk in musk and once started crying after seeing the consistency of milk. Next day he realized that the milk had not spoilt but smelt and tasted excellent. He called it magic milk and sold it like hot cakes. That is how cheese was considered as god's gift.



This is a milk product made from buffalo milk but may also be made from the milk of cow, goat, sheep, reindeer, camel, ass and other domesticated herbivores. Cheese is made by coagulating of the milk. It is then cured, matured/aged flavourings, spices, moulds, preservatives added depending upon the type of cheese.

Categories of Cheese

1. Fresh
2. Soft

3. Hard
4. Semi-hard
5. Blue

Fresh: Cottage, Mozzarella, Cream, Ricotta

Soft: Brie, Camembert, Bel Paese, Carr? de lest, Feta

Hard: Amul, Parmesan, Pecorino, Provolone, Caciocavalio

Semi Hard: Cheddar, Chesire, Cantal, Derby, Edam, Emmenthal

Blue: Stilton, Roquefort, Dorset Blue, Danish Blue, Gorgonzola

4.4.14 Entremets (Sweets)

The sweet course which in France is served after the cold buffet categorized into 3 parts:

1. Hot
2. Cold
3. Iced

Hot Sweet: fritters- a preparation of consisting of a piece of cooked or raw food coated in batter and deep fried in oil.

Apple fritters (beignet de pomme): Peel the apple and cut into 4mm thick roundels. Sprinkle with lemon and keep it in cognac for 30min. drain and dip in batter and deep fry in oil. Serve hot with castor sugar.

Cold sweet: cold pudding, usually served pre-plated in a dessert plate with the dessert cover.

Iced sweet: ice-cream and sorbets

Note: sauces, custard, whipped cream are served from sauce boat as accompaniment and Cut & croc according to the dish served.

Menu Example:

- Diplomat Pudding
- Charlotte Royale
- Baked Alaska
- Gateau Foret Noir
- Kaisersmarren
- Peach Melba
- Condé Ananas
- Pudding Diplomaté

4.4.15 Savoureux (Savoury)

These may be served as an alternative to the sweet course or as a separate course in addition to sweet or cheese to bring back the natural taste after sweet

course. Some items served in savourex may also be found in Horsd' oeuvre (in small quantities). They are usually pre-portioned by the kitchen.

Menu Example :

- Anchovies on toast
- Sardines on toast
- Buck Rare Bit
- Angles on horse back
- Devils on horse back
- Canape Cecil
- Welsh Rare bit
- Quich Lorraine
- Crepe a la Reine
- Canape Qvo Uadis

4.4.16 Dessert (Fruits)

These include all types of fresh fruit/dry fruits available according to the season accompanied by castor sugar and salt. The fruits are presented to the guest in a fruit basket to allow the guest to make his choice. In case the guest chooses dry fruits a nut cracker is provided for breaking the shell.

1. Soft fruits : Fruits like banana, grapes, cheeku, papaya
2. Hard fruits : Fruits like mangoes, apples, pears.
3. Dry fruits : It includes fruit like walnuts, cashewnuts, almonds, pistachio, chilgoja.
4. Citrus fruits : It includes fruit like grape fruit, oranges, sweet lime .

Service of Fruits :

1. It may be served in a fruit basket and half plate is provided.
2. Cutlery provided is fruit knife and fruit fork.
3. Grapes are served along with grape scissors and a finger bowl is passed at the end.
4. Dry fruits are served in the shells with a nut cracker.

4.4.17 Beverages (Tea/Café)

Traditionally referred to coffee only but nowadays may include a wide range of beverages like tea, tisanes, chocolates and other proprietary beverages. Coffee is listed in the French Classical Menu at the end course but it should not be counted as a course when planning a meal and should not be stated when referring to the number of courses in a meal.



Tea or coffee is served to the guest in a small cup of coffee (demitasse) to aid digestion. It is served from a tray in which coffee pot, milk pot and sugar are arranged and then it is served on an under liner and quarter plate provided. Cutlery provided is coffee spoon/tea spoon.

CHECK YOUR PROGRESS-II

Q. 1 List seventeen course menu in its correct order.

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Q. 2 Name 5 classical Horsd'oeuvres and explain any one in detail.

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4.5 ACCOMPANIMENT

Accompaniments are offered with certain dishes are mainly to assist in improving the flavour or to counteract richness. Depending upon the nature, style and extent of the menu on offer, there will be variety of food items available which supports the service of a range of dishes. Some of these items have specific use for particular dishes and others are used generally across a number of dishes. Accompaniments are highly flavoured seasonings of various kinds offered with certain dishes. The object of offering accompaniments with certain dishes is to improve the flavour of the food or to counteract its richness, eg. Apple sauce with roast pork. Many dishes have separate accompaniments and as they are not always mentioned on the menu, the waiter must know them. He should always have specific accompaniments ready for service at the right time. Hot adjuncts come with the dish from the kitchen, but cold sauces are often to be found at the buffet or sideboard. They should be served directly with a dish to which they belong. They should be served from the guest's left on to the top right of his plate (not on the rim). While serving from a sauceboat, the boat should be on an under-dish or small plate, carried on the palm of the left hand.

In serving, the sauceboat, lip should point towards the guest's plate. The spoon, or ladle, should be passed over the lip. Sauces are not to be poured from a boat. The following is a list of dishes with their standard accompaniments.

DISH	ACCOMPANIMENTS
Grapefruit Cocktail	: Castor Sugar
Tomato Juice	: Worcester sauce
Oysters	: Oyster cruet (cayenne pepper, pepper mill, chilli vinegar, Tabasco sauce) Half a lemon, Brown bread and butter.
Snails	: Brown bread and butter, Potted shrimps Cayenne pepper, Peppermill, Segments of lemon, Hot breakfast toast.
Ham Mousse	: Hot breakfast toast crusts, (removed cut into triangles served in, folded napkin on a side plate).
Gulls' Egg	: Brown bread and butter, Oriental salt
Smoked Salmon	: Cayenne pepper, Pepper mill, Half a lemon, Brown bread and butter.
Asparagus	: Hollandaise sauce (if served hot), Sauce Vinaigrette (if served cold)
Globe Artichoke	: Hollandaise sauce (if served hot), Sauce Vinaigrette (if served cold)
Corn on the Cob	: Beurre fondue
Fresh Prawns	: Brown bread and butter, Mayonnaise sauce, Chilled Melon Ground ginger, Castor sugar
Avocado	: Brown bread and butter
Onion Soup	: Grated Parmesan cheese
Tomato soup	: Croutons
Turtle soup	: Brown bread and butter, Segments of lemon, Cheese straws, Measure of sherry
Fish (fried)	: Slices of lemon with skin removed, Sauces: tartare, remoulade, gribiche
Fish (grilled)	: Slices of lemon with skin removed, Cold Sauces: tartare, remoulade, gribiche, Hot sauces: bearnaise, Tyrolienne

Fish (poached)	: Slices of lemon with skin removed, Cold Sauces: tartare, remoulade, gribiche, Hollandaise sauce, Mousselin sauce, Beurre fondue
Spaghetti	: Grated parmesan cheese
Roast Beef	: French and English mustard, Horseradish sauce, Yorkshire pudding, Roast gravy
Roast Lamb	: Mint sauce, Roast gravy
Chicken	: Bread sauce, Roast gravy, Parsley and thyme stuffing Bacon rolls, Game chips, Watercress
Baked Jacket Potato	: Cayenne Pepper, Peppermill, Butter

4.6 GARNISHES

A garnish is an item or substance used as a decoration or embellishment and often a flavour component on a prepared food dish or drink. In many cases, it may give added or contrasting flavor, some garnishes are selected first to augment the visual impact of the plate, while others are selected specifically for the flavor they may impart. This is in contrast to a condiment which is primarily a prepared sauce product of a specific flavor added to another food item. Parsley is an excellent example of an old fashioned garnish; this pungent green herb has small distinctly shaped leaves, firm stems, and is easy to trim into a garnish. Typically, few diners eat parsley garnishes.

A garnish makes food or drink items more visually appealing. They may, for example, enhance their color, such as when paprika is sprinkled on a salmon salad. They may give a color contrast, for example when chives are sprinkled on potatoes. They may make a cocktail more visually appealing, such as when a cocktail umbrella is added to an exotic drink, or when a Mai Tai is topped with any number of tropical fruit pieces. Sushi, the Japanese fish dish, may be garnished with baran, a type of plastic grass or leaf. Sometimes a garnish and a condiment will be used together to finish the presentation of a dish, for example an entrée could be topped with a sauce and then a sprig of parsley would be added as a garnish.

A garnish may be so readily identified with a specific dish that the dish may appear incomplete without the garnish. For example buffalo wings with celery stick garnish and blue cheese dressing or a banana split sundae with cherries on top. A food item which is served with garnish may be described as being garni, the French term for 'garnished'.

CHECK YOUR PROGRESS-III**Q.1 What is accompaniment?**

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Q.2 What is garnish?

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4.7 SUMMARY

As can be seen from above French Classical Menu plays an important role in Menu planning. Whatever the type of establishment or type of menu offered to the guest, French Classical Menu plays an important role in menu planning/menu designing. All catering establishment borrow heavily from the French Classical Menu when choosing the menu or list of dishes to be placed in the menu card.

Similarly for planning of meals, buffets, banquets or any other function the sequence of French Classical Menu is usually offered will 4-5 courses in the meal often offering and appetizer, a main course, vegetable and a sweet course taking into consideration the nutritional value, colour, variety of ingredients, accompaniments, garnishes etc.

4.8 Answer to Check Your Progress**Check your progress-I**

Q1. Refer to section 4.3

Q2. Refer to section 4.3

Check your progress-II

Q1. Refer to section 4.4

Q2. Refer to section 4.4.1

Check your progress-III

Q1. Refer to section 4.5

Q2. Refer to section 4.6

4.9 References/Bibliography

1. Dennis Lilli Crap, John Cousins, Food and Beverage Service, Hodder Education 7th Edition.
2. Manoj Kumar Yadav, Food and Beverage Service : A Text Book, Aman Publications 1st Edition, 2010.
3. S.N. Bagchi, Anita Sharma, Food and Beverage Service, Aman Publications 3rd Edition, 2006.
4. Bobby George, Sandeep Chartergee, Food and Beverage Service and Management.

4.10 Terminal Questions

1. Define Horsd'oeuvre and explain the various types.
2. Why do we serve cheese during a meal? Explain the method of serving cheese.
3. Plan a 5 course menu and give the cover for each course.
4. Write the French Classical Menu in its right sequence. Give eg. of each course along with the correct cutlery to be laid on the table.
5. Write short notes on following:
 1. Sorbet
 2. Farineux
 3. Caviar
6. Define Potage. Classify them and give one of each along with its country of origin.
7. Discuss the reasons for growing popularity of Sorbet.
8. Explain the following in 2-3 lines
 4. Savoury
 5. Oeuf
 6. Entrée
 7. Classical Horsd'oeuvre
 8. Salman Furmé

UNIT 05: BASIC INTRODUCTION TO BAKERY AND CONFECTIONARY

Structure

- 5.1 Objectives
- 5.2 Introduction
- 5.3 Raw Materials for bakery Products
 - 5.3.1 Flour
 - 5.3.1.1 Variety of wheat
 - 5.3.1.2 Flour milling
 - 5.3.1.3 Flour constituents
 - 5.3.1.4 Types of bakery flour
- Check your Progress-I
- 5.4 Leavening agent
 - 5.4.1 Chemical leavening agents
 - 5.4.2 Biological leavening agents
 - 5.4.3 Mechanical leavening agents
 - 5.4.4 Water vapor
 - 5.4.5 Combination
- 5.5 Milk products
 - 5.5.1 Constituents of milk
 - 5.5.2 Production of milk powder
- Check your Progress-II
- 5.6 Sweetener
 - 5.6.1 Corn starch
 - 5.6.1 Sucrose
 - 5.6.1 Other sweeteners
- 5.7 Egg
- 5.8 Fruits and Nuts
- 5.9 Shortening
- 5.10 Flavors and Colors
- Check Your Progress-III
- 5.11 Cake Making
- 5.12 Qualities in baked products
- 5.13 Summary
- 5.14 Answer to check your progress
- 5.15 References/Bibliography
- 5.16 Terminal Questions

5.1 Objectives

After reading this unit the learner will be able to understand following:

- Raw materials used in bakery
- Cake making

5.2 Introduction

The introduction to baking ingredients is necessarily simplified. Hundreds of pages could be written-and have been-on wheat flour alone. Much of the available information, however, is technical and of concern primarily to large industrial bakers. In this unit, you will find the information you need to produce a full range of baked items in a small bakeshop or a hotel or restaurant kitchen.

5.3 Raw Materials for Bakery Products

Wheat flour is the most important ingredient in the bakeshop. It provides bulk and structure to most of the baker's products, including breads, cakes, cookies, and pastries. While the home cook depends almost entirely on a product called all-purpose flour, the professional baker has available a wide variety of flours with different qualities and characteristics. In order to select the proper flour for each product and to handle each correctly, you should understand each type of flour and how it is milled.

Sugars belong to a group of substances called carbohydrates, a group that also includes starches. There are two basic groups of sugars: simple sugars (or monosaccharides, which means "single sugars") and complex sugars (or disaccharides, meaning "double sugars"). Starches, or polysaccharides, have more complex chemical structures than sugars. Sucrose is a disaccharide, as are maltose (malt sugar) and lactose (the sugar found in milk). Examples of simple sugars are glucose and fructose. All these sugars have different degrees of sweetness. For example, lactose is much less sweet than regular table sugar (sucrose), while fructose (or fruit sugar, one of the sugars in honey) is much sweeter than sucrose.

Any fat acts as a shortening in baking because it shortens gluten strands and tenderizes the product. However, we generally use the word shortening to mean any of a group of solid fats, usually white and tasteless, that are especially formulated for baking. Shortenings generally consist of nearly 100% fat.

Next to water, milk is the most important liquid in the bakeshop. Water is essential for the development of gluten. Fresh milk, being 88 to 91% water, fulfills this function. In addition, milk contributes to the texture, flavor, crust color, keeping quality, and nutritional value of baked products.

5.3.1 Flour

Flour as used in the bakery industry is the primary product produced by milling of wheat, rye, barley etc. Wheat Flour is a very important ingredient which can impart unique appearance characteristics to the product other flours from oats, corn of rye etc. are used to give special texture, flavour, appearance and nutritional qualities. Wheat flour is unique among cereal products in that it can be made into cohesive elastic doughs when it is mixed with water under appropriate conditions. Because of their physical characteristics these doughs will retain leavening gases throughout the various handling procedure necessary for

making bread and rolls, and they can be made to yield finished products of low density with fine uniform cell structure and a soft resilient response to chewing. Flours and meals made from rye, barley, oats and sorghum give doughs which are much less elastic and extensible. They do not retain leavening gases well and they tend to finished products which are coarser and denser.

Both, the inherent quality of the wheat and the milling conditions to which it is subject can lead to differences in the suitability of the flour for a given purpose since different bakery products may require different characteristics - a wheat which is entirely satisfactory for making bread flour may be totally unsuited for making pastry flour. The limits within which the milling quality of wheat can vary are genetically determined while the level achieved by any particular sample of wheat is affected by growing conditions, cultural practices and the treatment of wheat during the after harvesting.

5.3.1.1 Variety of Wheat

The only wheat species of importance for milling into bakery flour is *Triticum vulgare*. The following discussion concerns varieties of this species. For commercial purposes, wheat intended for flour milling is divided into the following types:

Hard red spring wheat- grown primarily in the Northern Great Plains states. The flours are usually high in protein and have strong gluten. They are especially suitable for hearth and pan breads, rolls, and specialty breads. These wheats may be blended with weaker wheat to improve the baking quality of flour.

Hard red winter wheat- produced in largest quantity in the southern Great Plains states. Most of the wheat grown in the United States is of this type. The flours are intermediate in protein percentage and strength. Most white pan bread is made with these flours and they have general usefulness for bakery goods.

Soft red winter wheat- grown in many regions of the country, but the region of greatest production is east of the Missouri and Mississippi rivers and below the great Lakes. Flour from this wheat is used mostly for cakes, cookies, and pastries since their protein content is low and the gluten relatively weak.

White wheat- grown in rather small quantities in many sections of the country. This grain is even lower in protein content than the soft red wheats and yields flour which may be suitable for cakes, pies, cookies, and other pastry products.

Each type includes many varieties, of which several may be of commercial importance at any time. New varieties of supposedly superior characteristics (Yield, resistance or baking quality, etc.) are introduced each year, and some achieve widespread acceptance by farmers displacing older varieties. The quality of the varieties falling into any the above categories can vary greatly. The mere fact that a wheat variety is classified as hard red spring, for example, is no assurance that it can be milled into a satisfactory bread flour although the odds are good of several varieties, mixed so as to give flour of predictable quality.

Adjustments of the milling conditions are made to optimize the quality of the flour obtained from a given mill stock.

5.3.1.2 Flour Milling

The main process in flour manufacturing is the milling where wheat is separated into endosperm, bran and germ. It is the endosperm portion which is used in the bakery industry. The more efficient is the process the less bran and germ is mixed with the finished flour. Although a small amount of flour is still produced on stone buhr mills the major production is by modern mills where combination of roller mills sieves and air separators are used. Following are the steps of operations which are performed in the flour mills:

1. Wheat selection and blending
2. Cleaning
3. Conditioning or Tempering
4. Milling

Wheat selection and Blending

The wheat chosen for mills, milling depends upon the final products, wheat flour variety i.e. quantum nutritious value or composition of Protein, Vitamins etc. There is some hybrid product of wheat which contains the qualities of different types of wheat together in it. Sometimes wheat of different graded are blends together for milling processes.

Cleaning

The grain is passed over a number of sieves to separate that wheat from impurities. Dust is removed by blowing with fans. The wheat from here is passed onto a disc separator. The machine consists of disc having hole through which smaller grains of barley, oats and others seeds from broken wheat grains. The clean wheat is then passed over a magnetic separator to remove iron contamination. Final cleaning operation is carried out by passing the grain through a washer and whizzes. Wheat separation from dirt is conveyed upwards out of the water by means of inclined vanes. Grain is moistened so that layers can be removed early.

Conditioning or tempering

Water and heat are added in the process known as tempering. It is done to prevent the bran from fragmenting which occur usually during milling and to maintain milling conditions.

Milling

Grading wheat into small pieces between steel rolls is called breaking. Pieces of broken kernel of various sizes and dimensions are separated by rotating sieves by purifiers which combine sieves and air currents to separate the particles on the basis of size classification. This produce is directed to either additional rolls or smooth steel reduction rolls.

The series of break rolls and sieves convert the grain into ' Semolina' which are small granules made up largely of endosperm, the outer husk will have been sifted out collected and ' Bran ' or coarse wheat feed, the semolina , is separated in a special plan-sifter into 3 grades, fine, medium and coarse. These three being

put through a purifier, which is an arrangement of sieves coupled to suction fans to draw off branny particles, each passed through a further series of period roller and sieving machine. The second part of milling operations is called gradual reduction system. There the rolls are smooth and the one rotate with a greater speed than the other.

A portion having few of flour fractions separated in the milling system is known as "Patent flour" and sells at a higher price than the straight run flour.

Wheat Flour Grades

There are four commercial grades of flours available in the market:

- **Straight Flour:** The total amount of flour containing all the four streams of the milled product is 100% of the extraction is called straight flour.
- **Patent flour:** A better grade of flour having lower ash content and lighter in color than straight flour is called patent flour. Short patent represents about 70-80% of the extraction while a fancy patent is only about 40-60%.
- **Cut straight flour:** Flour from which only a part of the middings have been removed is called cut straight flour.
- **Clear Flour:** The portion of the straight flour left after the removal of patent is called clear flour. It is darker and stronger than patent flour from the same wheat.

5.3.1.3 Flour Constituents

The range of composition which can be expected to occur in the United states in a crop year is shown in given table

Approximate Composition of Wheat		
Determinant	Range of Analysis in Percentage	
	Low	High
Protein	07.0	18.0
Mineral Substance (ash)	01.5	02.0
Lipid Fats	01.5	02.0
Starch	60.0	68.0
Cellulose (Fibre)	02.0	02.5
Moisture	08.0	18.0

The average composition of different components in wheat is given below:

Carbohydrates: Flour consists of about 70% of starch which is the principal carbohydrate present. The amylase content is 19.26%, the remainder being amylopectin. Starch influences the mixing and handling characteristics of flour. Small amount of sugar is also present in the flours in addition to the dextrin's, cellulose and gums. Starch is not usually considered as a major factor

influencing flour quality but these are some indications that starch may influence mixing time and dough handling characteristics. Some of the starch granules are broken during any first grinding may rupture a fairly large number of particles so that susceptibility of amylase action and the absorption are increase.

According to Koch-et-al (1951), aqueous extracts of baker and patent flour contains 0.01 % glucose, 10.02% tractose , 0.01% sucrose , 0.08% maltose 0.18%% melibiose and 0.07 % raffinose. Dextrins, cellulose and gums are also present.

Lipids: Wheat lipids consist of fatty oils, phosphatides and un-saponifiable matter and largely located in the germ. It is generally guessed that the lipids of wheat do have a definite effect on the baking quality of flour. The exacted is not known, in spite of numerous studies made on the subject , but it is through that both surfactants effect the reactions with protein are involved.

Mineral content: Most of the inorganic substances of wheat are contained in the bran and the aleurone cells. Flour showing a relatively high ash content will probably have more bran particles in it. The mineral content comprising mainly of sodium, aluminium, chlorine and silicone which are present in the bran and aleurone cells. Ash content is therefore an indication of extraction) since higher extraction flours of the same extraction from two different varieties of wheat may have different percentages of inorganic substances . Taking all of these variables into consideration flours with ash contents of 0.3% can be obtained .

Protein: The total protein content of wheat samples may vary from a low of about 7% to a high of almost 18%. These extreme values apply to only a very small percentage of all wheat and the usual range is about 8 to 10% for soft red or white wheats and 12 to 14% for hard wheat. Approximately 80% of this protein constitutes the gluten fraction the water insoluble protein complex which makes up the structural frame work of low density bakery foods gluten is located exclusively is the endosperm and so a large percentage of it is recovered in flour.

Vitamins: Wheat contains appreciable amounts of vitamins of B Group, but it is almost completely lacking in vitamins, unless the grain is sprouted. Vitamin D is also absent. Although wheat does contain carotenoids, they consist entirely of xanthophyll which cannot act as precursor of vitamin A. The oils of the embryo of wheat are rich sources of vitamin E.

Flour Additives: The additives are added to the flour to improve its baking characteristics. These may be bleached such as benzyl peroxide, maturing agents like chlorine dioxide enzyme sources such as malted wheat flour and enrichments such as vitamins and minerals.

5.3.1.4 Types of Bakery Flour

What samples can be of the same type and grade and yet be milled into flours having very different baking qualities. Some tests for the inherent baking quality of wheat can be applied directly to the grain or to products obtained from the grain by simple laboratory milling operation. The quality of flour required for

different products should have different analysis matching with requirements e.g. for domestic market a protein content of 9.5% is suitable. The biscuit flour should have lesser protein content about 8.5% and cake flour still lesser of protein.

Soya Flour: Soya flour, a milled product from Soya Bean, is generally used in bread to raise its protein content and maintain the freshness. It contains about 45% protein, 25% oil and about 2% of lipids. Due to its deadening effect on dough, proportion of Soya flour is restricted to about 8% quantity below this does not change the appearance, flavour and texture of the pan bread appreciably. Sometimes additional oxidizers may be required when Soya flour is used as an ingredient in the preparation. Soya flour is high in Lysine, an essential amino acid which is present in wheat at levels insufficient to allow complete utilization of wheat proteins. Use of milk in bread accomplishes the same effect, but protein concentrates from Soya are cheaper than milk. Solvent defatted Soya meal is the usual base for the concentrates.

Corn Meal & Flour: Corn flour is used in some of the specialty breads. These are also used to dust the oven and peel when making hearth breads. Corn flour is produced by dry milling of corn, as opposed to the wet milling process which is used to make corn starch products from the grain. Some small country millers still grind whole corn for the local trade or for health food stores, but these meals develop rancidity in a few days, so it is the universal practice in large mills to remove the germ in order to improve storage stability. Corn Flour contributes water absorption capacity but not strengths to doughs. Assuming that flavour is satisfactory, the chief quality factors of corn flour or meal are moisture, colour fat content and particle size.

Rye Flour: In some of the European countries rye flour is commonly used as bread grain in combination with wheat flour. Rye is a cereal grain closely related to wheat. It is the most common bread in northern Europe because it yield is more than wheat in cold climates and poor soils. The physical properties of doughs made from rye flour are inferior because they do not form extensible, elastic gluten with good gas retaining properties. Important characteristics of rye flour are colour, granulation and flavour. Protein content and ash are also important but are secondary factors. Since rye flour is comparatively cheaper, it is used to replace wheat flour in cookies and other applications where gluten is of little importance and different flavours can be covered up with other ingredients.

CHECK YOUR PROGRESS-I

Q.1 What are different types of wheat?

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Q.2 Write a note on flour constituents.

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5.4 Leavening Agent

Leavening is increasing the surface area of a dough or batter by creating within myriads of gas bubbles puffing up, thus increasing the volume and making it light. The expansion of these gases during baking increases the volume of the product and gives a desirable porous structure. The aeration of flour products is affected by the following:

1. Biological (yeast)
2. Chemical (baking powder)
3. Mechanical (whisking. beating)
4. Lamination (folding. rolling)
5. Combination of the above.

Substances which provide raising or leavening effect in bakery foods are call leavening agents. Carbon dioxide from added chemical reagents or from yeast fermentation is the principal leavening gas. Agents raise the volume thus reducing the bulk density. In the case of cookies ammonia produced by decomposition of added ammonium bicarbonate act as leavening agent.

5.4.1 Chemical Leavening Agents

Some of the widely used chemicals leavening agents are discussed as under:

Sodium Bicarbonate: It is extensively used in bakery industry as leavening agent due to its low cost, lack of toxicity, ease of handling, relatively tasteless and products and degree of high purity in which it is commercially available. An additional advantage of this bicarbonate is that its solutions tend to be less alkaline than; for example, the carbonates so that localized regions of very high alkalinity are less apt to be formed as the granules dissolve dough.

Carbon dioxide evolution from pure solution of Na_2CO_3 is slow at room temperature. When it is added to the dough gas evolves rapidly as the P^{H} of acid is 5-6. Soda has some disadvantage. Among them it is rather rapid of solution at room temp. A feature which reduces the amount of control which can be exercised over in leavening action.

Carbonic Acid gas	: 52.32%
Sodium Bicarbonate	: 99.84%
Sodium Carbonate	: 0.057%

Sodium Chloride	: 0.007%
Total Alkali	: 36.88%
Other substances	: 0.096%

Ammonium Bicarbonate is used rather extensively in cookies '8' and in few products that are baked almost to dryness. It volatilizes completely to ammonia and carbon dioxide under the influence of heat.

Ammonium Bicarbonate: Ammonium Bicarbonate is extensively used for products which are baked to low moisture content, almost to the dryness e.g. cookies other wise the product shall possess ammoniacal odour if water percentage remains high. Its leavening effect is due to the evolution of carbon dioxide from the sodium bicarbonate in the dough. Cream of tartar, potassium acid tartrate, acid calcium phosphate and acid sodium pyrophosphate are some of the more common chemicals used as acid leavening agents. Sodium aluminium phosphate is most economical due to its high neutralising values. Acid sodium pyrophosphate reacts more slowly with sodium bicarbonate than does acid calcium phosphate and therefore leads to the less loss of gas during the pre baking period.

Baking Powders: It is a mixture containing chemicals used for the aeration of various types of confectionery. The active ingredients are sodium bicarbonate and an acid substance, which in the presence of water will react with the bicarbonate to produce CO₂. The relative proportions of bicarbonate and acid body must be such that the bicarbonate is fully neutralised but the residue of acid is not excessive. In addition to these two chemicals, a baking powder contains inert filler such as starch. The acid bodies mainly used in baking powder are cream of tartar, acid sodium pyrophosphate and acid calcium phosphate. The amount of acid calcium phosphate or acid sodium pyrophosphate needed in a baking powder is about 1.3 times the proportion of sodium bicarbonate that is present and the amount of cream of tartar required is about 2.2 times the bicarbonate.

The aerating powers of baking powders are fixed by a statutory instrument, S.R. and O.1946 No. 157. According to these regulations, making powder must yield not less than 8% of available carbon dioxide and not more than 1.5% of residual CO₂ the available CO₂ being determined as specified in the schedule to the order. Golden raising powder must yield not less than 6% of available CO₂.

Fillers: Corn starch, rice flour etc. are commonly used fillers in the baking powders. The purpose of filler is to stabilize the baking powder by keeping the acid from contacting the bicarbonate of soda and it prevents reaction if moisture should get into the baking powder. It also acts as a means of standard the strength of baking powder. Egg albumen is also used as a filler to slow up the action of powder. These two components to gather thicken up the water so that a good body of foam is made.

Composition of Baking Powders

These are formulated to give total carbon dioxide strength of 14 to 20% based on the fact that the powder when used will be moisture free. As a guideline principal

the neutralizing values of various acidic ingredients are given on the basis of pure chemicals.

Ingredients	Kgs. of Sodium Bicarbonate neutralized per kg. Of the ingredient
Tartaric Acid	1.16
Cream of Tartar	0.44
Sodium Aluminium Sulphate	1.04
Mono Calcium Phosphate	0.80
Sodium Acid Pyrophosphate	0.75

Depending on the various combinations following types of baking powders are given along with their formulations.

1. Cream of Tartar Baking Powder

Component	%Composition
Corn Starch	22.40
Sodium Bicarbonate	27.00
Cream of Tartar	45.00
Tartaric Acid	5.60
	100.00

Another formulation is

	- %
Sodium Bicarbonate	26.00
Potassium Bitartrate	60.00
Corn Starch	60.00
	100.00

2. Straight Alum Baking Powder

	%
Sodium Bicarbonate	29.73
Sodium Aluminium Sulphate	25.68
Starch	47.59
	100.00

Another formulation is

	- %
Sodium bicarbonate	28
Strach	33
Sodium Aluminium Sulphate	19
Acid Sodium Phosphate	20
	100

Soda Alum	28
Sodium Bicarbonate	29
Corn Starch	43
	100

3. Calcium Acid phosphate Baking Powder	%
Sodium Bicarbonate	26.80
Mono Calcium Phosphate	35.50
Corn Starch	39.70
	100

This formulation is most common of the phosphate baking powders.

	%
Sodium Bicarbonate	35
Acid Calcium Phosphate	13
Sodium Aluminium Sulphate	25
Edible Starch	27
	100

Sodium Bicarbonate	25.20
Acid Calcium Phosphate (Gran.)	56.00
Edible Starch	18.80
	100.00

4. Mono Sodium Phosphate Baking Powder	%
Mono Sodium Phosphate (Anhy.)	38
Sodium Bicarbonate	27
Edible Starch	35
	100

	%
Acid Sodium Phosphate (Anhy.)	27
Sodium Aluminium Sulphate	30
Edible Starch	43
	100

5.4.2 Biological Leavening Agents

Yeast are used by bakers are unicellular plants which possess, under normal conditions of growth, a vegetables body (thallus) consisting of simple in pairs, in groups of three in straight or branched chains consisting of as many as twelve or more cells. Yeast normally reproduced by budding, the process where a daughter cell grows from the parent cell and eventually assumes an independent existence, although it may retain its attachment to the parent cell. For their energy requirements yeast utilise sugars of the flours and doing so carbon dioxide and alcohols are produced as waste products. The process is called fermentation. It is their property of the yeast which is utilised by bakers for leavening or rising of different products like bread, rolls, sweet doughs and crackers. The advantages of yeast as leavening agents is that it can contribute a characteristics taste and aroma and the evolution of gas can continue over a much longer period of time. Its disadvantage is the difficulty to control the evolution of carbon dioxide. It is also expensive as compared to chemical leavening agents. Each Yeast cell can perform many different chemical reactions but those of most concern to the baker are in the group making up fermentation. The most obvious manifestations of these changes are the production of carbon

dioxide and ethyl alcohol. Sugar such as glucose and fructose are the substrates which are transformed by fermentation. A simplified equation describing the sum total of the fermentation reaction is



Carbon dioxide is responsible for raising the dough while ethanol contributes to the aroma of baked products. Yeast is available in market in two forms.

- i) Compressed yeast.
- ii) Dry yeast

Compressed Yeast: Compressed yeast is sold in wax wrapped blocks containing about 70% moisture. The cell averages 4-6 in Width and 5-7 in length. Compressed yeast loses about 6.5% of its activity during 2 weeks storage time at 40°F. Fresh compressed yeast is supplied to local consumers while refrigerated trucks are used to transport this commodity to the far away situated consumers.

Dry Yeast: Active dry yeast containing about 92% solids having almost double amount of active ingredient when compared to a compressed yeast. Although compressed yeast is suitable for any yeast leavened product, active dried yeast has certain advantages like stability at room temperature, ease of measuring and better dispensability and is therefore preferred and used by most of the bakery plants. It can tolerate drying, high sugar concentrations and some inhibitors better than can compressed yeast strains. It may take a few minutes for the minutes the water to reach to the centre of the granules. After dehydration is complete the yeast may be chilled or even heated to slightly higher temperatures without any appreciable loss to its active properties of fermentation. Mixing of dry yeast with water is accompanied by significant evolution of carbon dioxide.

Checking the Relative activity of yeasts: This property may be checked by incorporating different samples in a series of doughs made under identical conditions, placing these doughs in graduated cylinder and noting the height to which they rise in a given time.

Production of Yeast: In the modern techniques yeast is produced from molasses which is a by-product of distilleries manufacturing alcohols etc. In practice molasses is filtered to remove any suspended impurities and feed to a clean tank called fermenter. A small amount of yeast is added as seed and the temperature is maintained at about 26 for several days. Air is also tumbled to help the fermentation process. Fermentation is complete of about 8-10 days time and the product from this tank is sent to crystallizer. Yeast crystals are again filtered and mixed with magnesium phosphate in required proportion. Mother liquor from the crystallizer is sent to the fermentation tank for reuse. Milk of magnesium phosphate mixed with yeast crystal is again filtered and dried. A tray drier is generally used for drying purposes. A controlled humidity air is used for drying purpose. Dried yeast containing about 7-15% of moisture is packed in water proof bags or tins.

Specification for Bakers Yeast Characteristics		Requirement for	
		Bakers Yeast (Compressed)	Baker's Yeast (Dried)
1	Moisture % by wt. max.	75	8
2	Dispensability in water	To satisfy ISI test	To satisfy ISI test
3	. Fermenting power, min	80	160
4	Yeast cell count millions (Dry bases) Min.	500	10000
5	Dough raising capacity	To satisfy ISI test	To satisfy ISI test
6	Microflora, other than yeasts, Million per gram or dry basis maximum	3.0	8.0

5.4.3 Mechanical Leavening Agents

It is incorporating air by whisking, beating and sieving. When sugar and eggs, fat and sugar, fat and flour or any combination of these are beaten or whisked together, or flour is sieved, it works as aeration. Whichever way the air is introduced into the mixing, be it by hand, whisk, spatula or by machine, it is still termed mechanical aeration. Air is incorporated into the mixing by one of the above means and is held there by the fat, eggs, or both; aeration is brought about by the expansion of the air in the hot oven, together with the water vapour pressure within the air bubbles. One of the best examples of mechanical aeration is the sponge cake, where foam is produced from the eggs and sugar, the flour is then folded in the sponge and baked. The egg and flour proteins coagulate and the starch cooks thereby making the sponge set.

5.4.4 Water Vapour

Lamination acts as a raising agent. In pastries- folding and rolling helps to give the lift. In Idlis, khaman, dhoklas, etc. steam formed by the heat, helps to puff up, as liquid and flour are present in equal quantities. As the popcorns have moisture inside the grains, when heated, they expand in volume. The fundamental objective when making puff pastry is to build up a structure of fat and dough consisting of many layers so that when subjected to heat in an oven, it will expand and lift evenly, to produce goods with short eating properties. In the oven, the pastry, which consists of thin layers of dough separated by films of fat, comes under the influence of heat, and the gluten in the dough layers is caused to expand and blister. The fat melts and the dough layers are insulated and the fat takes on a higher temperature, dough layers are cooked, the gluten coagulates and becomes almost rigid and the pastry does not collapse. It is the expansion and blistering of the gluten in the dough layers as a result of steam pressure from the water in the dough that is responsible for the lift.

5.4.5 Combination

Danish pastries are a combination of aeration by yeast and by lamination. For this, rich yeast dough is made and butter is incorporated as for puff pastry. In

this, the pastry expands in volume, because of the process of aeration, by lamination, and at the same time is aerated by the action of yeast.

5.5 Milk Products

Milk is a biological commodity obtained by complete milking of one of more healthy cows. It is widely used in bakery and confectionery industry to improve the flavour and physical characteristics as well as nutritive value of the product. In the case of bread the addition of non at dry milk to the dough improves the crust colour increase the water adsorption and modifies dough handling properties. Lactose of the milk helps the toast made from the bread to colour more rapidly and uniformly. The added water is retained in the loaf so that it remains softer for long periods. The principal constituents of milk are butterfat, milk protein lactose, minerals and water. Milk and milk derivatives have several effects on bakery foods and the result is generally improvement of the flavour and physical characteristics as well as the nutritive value. Whole milk is used mostly in premium goods where the flavour contribution of butter fat can be worth while.

5.5.1 Constituents of Milk

Constituents of milk are discussed as under:

Proteins: The principal proteins of milk are casein, lactalbumin and lactoglobulin. These probably should be regarded as single compounds. Casein is the structure forming, Water binding protein. When coagulated by acids or enzymes it forms the basis for virtually all cheeses. The milk proteins have a high protein efficiency ratio. Because they are relatively high in lysine, they are excellent supplements for cereal proteins.

Carbohydrates: The only sugar present in milk is lactose. It is a reducing sugar, a disaccharide containing glucose and galactose moieties. Lactose is considerably less soluble than either sucrose or glucose. In baked goods, it functions as a tenderizer, since it is a reducing sugar, lactose participates in non enzymatic browning and improves coloration in the oven.

Lipids: Virtually all of the lipid materials in whole milk are triglycerides of fatty acids. The phospholipids apparently tend to stabilize the milk of suspension and have a small emulsifying effect on doughs. The sterols an high molecular, weight alcohols, primarily cholesterol, which are soluble is fats.

Vitamins and Minerals: On a weight basis or on a caloric content basis, Milk is not a particularly good source of vitamins. Milk is excellent source of calcium and phosphorus which are especially important in the nutrition of babies. It is low in iron. Averaging about 3 ppm. The mineral constituents of milk play important role in the coagulation of proteins during heat processing. Calcium and magnesium facilitate the precipitation of protein while phosphates and citrates tend to protect them or keep them in suspension during sterilization procedures or other heat treatments.

Fluid and concentrated milk products: Fluid milk products such as whole milk, skim milk and butter milk have large percentage of water and therefore are more bulky and difficult to store. Being perishable they should be stored under refrigeration and used within short period. Due to these disadvantages they are very expensive to be used except in the cases where local supply is plentiful.

Concentrated products are fluid a product from which most of the water has been removed. These are called condensed if only water has been removed, condensed sweetened if sucrose has been added and evaporate if water has been removed and end product is canned and sterilized. Concentrated milk products are viscous fluids adaptable to bulk handling operations. Average composition of the whole milk is :

Constituent	%
Water	87.2
Fat	3.8
Lactose	4.9
Ash	0.7
Casein	3.0
Solubles	0.4

Dried milk solid products: These are most common milk products in bakery due to their distinctive advantage over others. They occupy a minimum of storage space and have good storage stability at ordinary temperatures and are therefore cheaper to use . They are produced by removing all the moisture from the fluid products and are available in powder and granular form.

5.5.2 Production of Milk Powder

Milk powder may be produced by any of the following two methods:

1. Roller drying.
2. Spray drying.

Roller and spray dried products differ considerably in appearance and properties. While roller dried powder is creamy in colour, granular product having characteristic tallowy odour, spray dried milk is a fine powder with smaller particle size and reconstitute more easily due to eat treatment. Yield of powder per gallon is 1.9 lbs. From whole milk and 0.9 lb. From skim milk. It also contains about 3% of moisture.

The most important property of milk powder is its solubility measured by proportion which can be reconstituted in solution or colloidal suspension in water. Roller dried powder show a solubility value of 90% while for spray dried powder this value is 99%. To improve this value milk to be roller dried is usually neutralized down to a "Lactic acid" value of 0.12%.

Roller Drying: Two standard steam heated rollers of about 5ft. long by 2 ½ ft. in diameter with a clearance of 0-2 are generally used for milk powder production. These revolve inward at the top and are heated to a temp . of 285to 302 . Dried milk formed on the roller is scraped off by a steel knife. The powder is transported to the sieve shakerby a screw conveyer and satisfactory fraction is

packed in tins of special bags. A standard pair of rollers have capacity of drying 90 gallons of milk per hour.

Spray drying: Spray drying process essentially consists in directing a spray of hot, pre-condensed milk into a current of hot air. In practice the milk is preheated to a temperature of about 160 of and atomised into a system of air heated to about 200- 500 of . powder formed falls to the bottom and is collected. Milk powder produced under ideal conditions of temperature and flow rate of milk and air is virtually soluble in water and has a light colour and mild flavour.

Dried Milk Solids Non Fat (MSNF): This is the name given to the dried milk powder produced from skimmed milk by above mentioned process. The three principal stages in converting fluid skim milk into MSNF are:

1. Preheating of the fluid Milk
2. Condensing
3. Drying

Variations of conditions existing in any of these treatments can change the characteristics of finished material. General composition of MSNF required for Bakery product is given in the following table.

Requirement of extra Grade MSNF

Composition	Spray Process (Not more than)	Roller Process (Not more than)
Milk fast	1.25%	1.25%
Moisture	4.0%	4.0%
Scorched particles	15 mg.	22.5 mg.
Bacterial Estimate (Per gm)	50,000	50,000
Solubility Index	1.25 ml	15.0 ml.
Titrateable Acidity	0.15%	0.15%

CHECK YOUR PROGRESS-II

Q.1 What are different types of leavening agents used in bakery?

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Q.2 Write a note on use of Milk in bakery.

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5.6 Sweetener

Sweetener is an essential ingredient of almost all the bakery products. These sweeteners can affect the taste, texture and appearance of a product to an appreciable extent depending on the proportion and the types of sweetener most commonly used are sucrose. Sweeteners can be divided as follows:

1. Corn Starch Sweeteners
2. Sucrose and invert sugar
3. Other sweeteners.

5.6.1 Corn Starch

This is the cheapest and most commonly used sweetening agent in the industry in the form of liquid syrups and dried corn syrups. These are hydrolysed products of corn starch and sometimes have functional advantage over sugar.

Two important characteristics of corn syrups are Dextrose Equivalent (DE) and degree Baume. Dextrose Equivalent gives the information about the sweetness, viscosity and preservative quality of the material and degree Baume, the solid content.

Corn syrup commonly known as liquid glucose is chiefly produced from maize and potato starches. In the manufacturing process starch is hydrolysed under high pressure in the presence of hydrochloric acid and the product from the hydrolysis is neutralized, de-odorized. Extent of hydrolysis is controlled to produce syrup of required dextrose equivalent.

According to the conversion liquid glucose can be divided as:

- Low conversion : Having Dextrose equivalent value of less than 40
Regular conversion : Having DE value from 50-57.
High Conversion : Having DE value of 58-64.

Corn syrups some time are specially treated to reduce mineral content and to improve flavouring properties.

Quality Control of Corn Syrup: Refractive index and density of the syrup give a fairly good indication of total solids content which is ultimately important for the takers. Degree Baume is the specification quoted for the density and can be determined by special hydrometers. Because of the high viscosity determination is made at 140° and as an arbitrary correction 1.00 Baume is added to the reading. Corn syrup solid and dextrose are prepared by drying corn syrups. The normal moisture content of these products lies between 3 to 3.5%. These are generally available as 42DE.

5.6.1 Sucrose

Refined sugar commercially known as Sucrose is derived from sugar cane or sugar beet. It contains about 99.8% sucrose, with less than 0.05% moisture, about 0.05% invert sugar and other carbohydrates and traces of ash. Granulated sugars of different particle size are used for icings, frostings, uncooked candies

and for dusting on finished products. Sugar of the fine particle sizes tend to cake badly if stored for long periods of time. This problem can be alleviated by adding about 3% of corn starch or, less often, 1% tri-calcium phosphate during grinding, some of the bakeries have their own pulverising plants to get sugar of required sieve analysis.

Invert Syrups: The mixture of dextrose and levulose in equal weights produced by heating a sucrose in the presence of an acid or certain enzymes called "Invert Sugar". By this treatment the sugar requires more sweetness and also more concentrated solution can be prepared. Common types of these invert syrups or invert sugars contain 73-76% solid with 30-60% invert. Total inverted syrups contain 72-73% solids.

Honey: Honey due to the cost factor, is not used as sweetening but as flavouring agent in honey cakes and gateaux. The flavour of honey which is distinctive varies with the type of nectar which is used by bees in its production. Typical analysis would be -water 17.2% protein 0.3%, Ash 0.2%, Carbohydrates 82.3% and no fat. The sugars are mostly D glucose and D fructose with substantial percentages of sucrose and traces of several other sugars.

Molasses: Juices extracted from sugar bearing plants and concentrated by boiling are called molasses. These thick syrups contain other substances besides sugar that are present in plant juice. Open kettle molasses is produced in West Indies by boiling cane juice until most of the water has been evaporated. Blackstrap molasses is the final molasses removed in the sugar manufacturing process.

Brown sugar: Brown sugar from cane syrups results from stopping the purification process short of the final steps so that some of the molasses flavouring ingredients are retained in the finished product. Brown sugar is made by adding cane molasses to fully refined sugar crystals. Total sugar content ranges from 90 to 95% and moisture from about 2.4% brown sugars are composed of very small crystals.

5.6.1 Other Sweeteners

Saccharin: For all practical purposes, saccharin is the only non-nutritive sweetening agent being used by bakers and confectioners, although number of new artificial sweeteners are investigated. It is sodium salt of 2,3 dihydro-3 oxobenzoino -sulphomazol. In acid form from an aqueous solution, it is about 300 to 500 times sweeter than sugar but does not exactly match to its flavour. In some of the bakery products, like cookies and crackers substitution of sugar by saccharin may lead to the difficulty in providing adequate bulk and texture. To avoid this difficulty sorbitol or mannitol may also be incorporated in the product formulation.

5.7 Egg

Eggs are used in bakery and confectionery as a result of their emulsifying leavening, tenderizing and binding actions. They have power of entrapping air when they are whipped there by forming stiff and stable foam which can be

further improved by the addition of citric or lactic acid, Liquid whole eggs and the frozen and dried products derived from them vary in composition depending upon the characteristic of the shell eggs used in breaking operation. Many specifications for frozen whole egg require a minimum solid content of 26% and some years ago this was valid. Fresh egg consists of about 30% yolk, of about 58% egg white or albumen and about 12% of shell. The average composition of yolk and whites are:

	Whites %	Yolk %
Moisture	87.0	50
Protein	12.5	16
Fat	0.3	32
Mineral salts	0.6	0.8

White part or albumen mainly contributes to the forming properties of the egg. Yolks alone cannot be beaten into stiff foam because of their high fat content. The colour of whole eggs and egg yolks depends to a very great extent upon the plant pigments which are in the feed the chicken, and it may vary with the season source, method of processing and other factors. The glucose in egg white leads of the development of off flavours and darkening during storage as a result of the non-enzymatic browning. In manufacture of dried albumen or dried whole egg glucose is removed by fermentation or by enzymatic oxidation. The percentage of glucose in yolk is about half that in white and is less of a storage problem. One whole egg shell aerates its own weights of flour and if smaller amount of egg is used in the composition some baking powder has also to be included. Frozen or dried eggs are almost as good as fresh eggs if properly made.

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Dried Eggs

There are four drying procedures which are used to make dried egg albumen.

1) Pan Drying

In this process a very thin layer of egg white is placed in shallow pans. A current of hot air is blown over it. The dry crystals so formed are ground to a powder and packed for use in bakery products.

2) Foam Drying

It is similar to that if pan drying except that albumen is foamed by whipping before it is put in the drier and layers so formed are thicker.

3) Spray drying

Most of the dried albumen available in the market is produced by spray drying which yields a product entirely satisfactory for most of the purposes when dehydration conditions are carefully controlled.

4) Freeze Drying

This method is relatively expensive but the product is of good quality with virtually no heat damage. In the process the egg white is first frozen and then subjected

to vacuum treatment to remove water vapours. Depending upon the conditions, both frozen and dried eggs deteriorate in storage. Quality of the raw eggs is more important in this regard. In general frozen eggs retain more of the original properties. Powdered dried eggs are easy to use and store but reconstitution and sequence of addition are critical factors for their use in bakery products.

One kg of whole egg solids are mixed with 4 kgs. of water to yield the equivalent of 4 kgs of liquid whole egg. The part of dried, yolk plus 1.25 parts of water is the appox. Equivalent of 2.25 parts of fresh or frozen parts of liquid white. These rations can be treated as a guide for reconstitution of eggs.

An egg yolk contributes colour, flavour, shortness and an emulsifying action to the bakery products while albumen contribute towards the natural properties i.e. texture characteristics. Egg whites should cause the change in flavour if of good quality. The most common tests which are used to check quality of eggs are test for protein, fat, total solids and inorganic matter. Odour, taste and colour are representative of freshness of eggs.

Mixture of eggs and other additives like salt, sugar, corn syrup or cereal such as defatted soya flour are also available in the market to use in specific products.

5.8 Fruits and Nuts

In bakery products use of fruits and nuts have a unique importance. The customer tends to evaluate the products as of high quality if costly fruits and nuts are incorporated in the formulation. Presence of fruits and nuts is clearly correlated in consumer's minds with high quality and they tend to evaluate the bakery product. Cherry, strawberry, blueberry and peach are some of the common fruits used. Raisins, currents figs and dates are few dried fruits which find application in bakery products.

Cherries: Cherries are extensively used in bakery products. These are marketed in canned, frozen or candied form. Two distinct varieties are canned, the sweet white fruit and sub acid red or purple fruit. Stage of maturity at harvest processing conditions and storage conditions are the factors which effect flavour, firmness and appearance of the cherries. Size established buy grading original conditions of the cherries is indicated by the number of blemishes present. The packs of frozen sweet white cherries are packed in plain cans. In syrup containing erythromine to colour them red, white, purple fruit is packed in lacquered cans. After filling and covering them with hot syrup, the cans are exhausted for a few minutes at about 180f the lids are spun on and the cans cooked for 16 to 20 min at 210 f and cooled Cherries in plain can do not require any special precaution while that canned in syrup should be given a heat treatment sufficient to inactive the enzymes in the stores of fruit. These should be stored in cold condition and avoid the hydrogen swelling sugar syrup or dry sugar is added to cherries being prepared for freezing. Flavour of strawberries is

compatible with many kinds of baked foods. Strawberry jams, jellies and their imitations are desirable. A typical analysis of straw berries is as follows:

	%
Moisture	88.6
Protein	0.7
Fat	0.5
Total Carbohydrate	8.4
Ash	0.5
Fibre	1.3

Frozen fruits are greatly preferred to the canned when piece appearance and fresh flavour are important, and not much of the canned fruit is sold to bakers. Strawberries are canned only after washing and colouring. Washing removes adherent soil and sand. Bakers generally prefer frozen strawberries because frozen fruit has better texture and flavour than canned. Frozen berries without sugar are packed in plastic lined fibre board boxes while sugared berries are packed mostly in 10 to 30 lb Tins.

Peanuts: Peanuts are most common nut used in bakery industry as garnishing, texturising and flavouring ingredient for sweet dough products, cakes and dough nuts etc. Freshly dry peanuts have a moistures content of 30-39%, which on air drying of shell drop to 5-10 percent. The roasted peanuts have 0.5 -1.5 percent moisture contents the same as peanut butter. The average composition of peanut kernels is as follows:

Peanut Kernel Composition

Ingredient	Percentage
Protein	21.0-36.4
Lipids	35.8-54.2
Crude fibre	1.2-4.3
Nitrogen free extracts	6.0-0.3
Reducing Sugars	0.1-0.3
Disaccharide Sugar	1.9-5.2
Starch	1.0-5.3
Pentosons	2.2-2.7
Pentosons	3.9-13.2
Ash	1.8-3.1

These peanuts have a storage life of about one year if kept protected from infestation and foreign orders. This life reduces by 2/3 if stored after shelling and by another 2/3rd if stored after blanching and spitting. Chopping and roasting further the storage life. Then nuts retain their good organoleptic properties when stored properly. To increase the shell life of stability in or on cookies antioxidants are added or coatings of rein and acetylated monoglycerides are applied. Roasted nuts are used for this purpose.

Peanut butter is also used in certain cookie doughs and fillings. The peanut butter used for cookies should be of special high roast type, roasted to a point

just short of development of bitterness or scorched flavour. Blanched peanuts are highly desirable as the raw material. Peanut butter is firstly resistant to the development of rancidity if stored in light proof containers and protected from oxygen. Its stability depends to a considerable extent on the conditions to which the peanuts were subjected before being ground.

Almonds: Almonds are also widely employed nuts in the bakery of confectionery trade. The average composition of almond as food produce is

Ingredient	%
Protein	20.5
Fat	53.5
Available Carbohydrate	4.3

For most of the applications, kernel i.e. skin removed kernel are used. For this purpose, almond is treated with hot water at 180^of for about 3 minutes and then skin is removed by hand or special machines. If long storage life is required excess of moisture is also removed.

As compared to peanuts an almond are more resistant to rancidity development, but deteriorates with time and decrease in acceptability is accelerated by blanching or roasting. Antioxidants are also used to increase the storage life of roasted nuts. These should be stored at freezing temperature if to be stored for several months. Moisture -proof and inert resistant packaging is used for room temperature storage. A useful composition for some bakery foods is made of the following ingredients mixed to a smooth paste.

Ingredient	Parts
Kernel paste	15
Granulated sugar	12
Flour	4
Eggs	2
Water	2
Almond paste	7.5

Coconut: Dried meat of ripe coconut is generally used for cookies and other bakery products. Sometimes further processing is also done to change the texture appearance and taste etc. i.e. these are cooked with sugar and glycerol or roasted. When included in cookies dough thin nut usually increase the spread. Shredded particles are more effective than fine particles in this respect. Sweetened coconut is more expensive than the unsweetened and contains about 39% of fat, 53% of carbohydrate and 3% water. Plastic coconut is a dried meat finely ground. Liberation of oil through the rupture of the cell wall causes the product to feel softer than the granular dried material. Coconut syrup and coconut honey made by cooking sugar with freshly ground coconut meat is also available in the market. Coloured coconut shreds are also used in some of the products. To give a nut like flavour and crisp texture to the cookie toasted coconuts may be used.

Pecans: These are highly decorative and flavourful ingredients used in bakery foods. Before use pecans are cured for about three weeks at room temperature in dry stage. By this treatment, moisture content of the meat is reduced to about

4.5%. Free fatty acids and peroxide value of the lipids increase and tannins of the seed coat oxidize with a resultant colour change from pale to medium brown. This thin treatment imparts to the pecans characteristic appearance, aroma, flavour and texture. If fresh flavour is to be retained for more than three months, storage temperature of 40°F and 70 to 80% Rh value are necessary. At 0°F the shell kernel retains good quality for more than five years period.

To double the shelf life pecans meat is heated to an internal temperature of 176°F in dry air or in oil by inactivating the oxidative enzymes. Higher temperature treatment up to 365°F for 15 minutes destroys natural antioxidants but increases the aroma and flavour many times. This is good for baked foods but has unfavourable implications for cookies and frozen baked foods.

Raisins are dried grapes of Muscat or Thompson seedless variety. These are mostly used in highly moisture bakery products. Before use, these are often soaked and are brought to moisture content in equilibrium with that of dough and mixed with it. But excessive soaking leads to the effusion of acid and sugar into the dough with consequent deleterious effects and also makes the fruit susceptible to breakage during mixing. Addition of 6 kgs of hot water to 100 kgs of fruit and allowing the mixture to stand for 3-5 hrs is sufficient to soften the fruit and permit its use in cookies. Normally raisin has a moisture content of 15-17% and will be in equilibrium of about 50% at room temperature.

The currant is a small and dark grape which yields a small raisin of quality for baked goods when dried. Typical analysis of raisin is given:

Analysis of Raisin

	%
Moisture	16.1
Crude Fibre	0.9
Nitrogen	0.5
Ash	1.8
Acidity	1.6
Total Sugar	71.0

5.9 Shortening

Shortenings are essential components of bakery products. The kind and amount of shortenings and emulsifiers in the formula affect both the machining response of the doughs and the quality of the finished product. Shortening may be classified either on the basis of their chemical or physical characteristics, the raw materials from which they are made, or the application for which they are intended. The most popular division of shortening is as follows:

1. Natural
2. Modified

1. Natural Shortening: Under this heading the natural fats and oils come. They are vegetable oils. Amongst these vegetable oil is used as shortening in India. Mainly soybean oil, cottonseed oil are the principal raw materials for

hydrogenated vegetable oil shortening. Where blend flavours, good creaming properties or vegetable origin are important, hydrogenate fats prepared from soybean or cottonseed oil is the shortening of choice and they are used in breads, rolls, pastry and icing etc. Colorant oil is widely used in the cracker and cookie industry as a spray fat, and in fillings and coatings. Cocoa butter is an essential part of pure chocolate coatings and is used in a few other special formulas.

2. Modified Shortening: Modified shortening include liquid shortening. They are made by processes known as hydrogenation.

Emulsifiers: Emulsifiers are surface active agents which are mainly noted for their ability to promote the formation and improve the stability of emulsions. In bakery foods, they may have desirable functions apparently unrelated to their emulsifying action. There are very potent emulsifiers which cannot be used in food stuffs because of legal restriction. A few are acceptable in most standardized foods however and several more are permitted for non-standardized foods. In bakery foods they may have desirable functions apparently unrelated to their emulsifying action. There are very potent emulsifiers which cannot be used in food stuffs because of legal restriction. A few are acceptable in most standardized foods, however and several more are permitted for non-standardized foods. In bakery foods they may be desirable functions apparently unrelated to their emulsifying actions. Emulsifiers are used in bakery foods to improve palatability, texture and sales appeal. They inhibit forming of crumb associated with selling retarding the rate at which starch Crystallises. GMS is important emulsifiers. It is used to increase the shape of the cake. Emulsifiers used in the bakeries are mono and diglycerides propylene glycol, sorbitol etc.

Antioxidants: Antioxidants are materials which can retard the development of certain of odours during storage of fat containing foods. Although antioxidants are of little importance for preserving high moisture bakery products such as bread and cakes, they may be needed in crackers, cookers and snack products which are expected to remain edible for several months. In addition, antioxidants are usually added to bulk shortening since the conditions of storage and length of storage create the danger of rancidity development. Rancidity means development of objectionable odour and flavour due to decomposition of fatty matters. At the present time, only three chemical compounds are commercially important as antioxidant for foods. They are

1. Butylated hydroxyabusole (BHA)
2. Butylated hydroxyabusole (BHT)
3. Propyl gailate

Citric acid or phosphoric acid may be added to improve the effectiveness of antioxidant.

5.10 Flavours and Colours

Flavour plays an important role in bakery products as they contribute something to the odour or taste of finished product. The fruit fillings in the pies ard other pastries dominate the character of the product. In the case of bread the addition

of non fat dry milk to the dough improves the crust colour, creates the water absorption and modifies dough handling properties. All spices should be stored in a cool airy and dry room. Following are some of the common spices used as flavouring agent in bakery products.

- Cinnamon
- Cloves
- Ginger
- All spices
- Cardamom seed
- Poppy seed
- Vanilla

Vanilla: Vanilla is the fruit of an orchid cultivated in tropical and semitropical countries. The pods are cured in special ways to bring out the characteristic aroma and taste of vanilla. Although the ground pods may be used, it is common to use its alcoholic extract incorporating all the desirable flavour notes. These extracts are aged in glass or stainless steel containers to improve the flavouring properties.

Oleoresin of vanilla is prepared by evaporating the filtered extract of commented vanilla beans under vacuum. These are diluted with solvent to give 10 fold extracts and solid.

Synthetic vanilla is a mixture vanillin and ethyl vanillin is almost perfectly acceptable substitute for the natural product. Being considerably cheaper than natural extract it is finding more and more use in conventional bakery products.

Volatile components of both synthetic and natural extracts tend to be lost in the baking process the later being quicker to be distilled. The loss is greatest at elevated temperatures and in products baked almost to dryness, such as cookies.

Cocoa Products: Coca is a chocolate from which fatty material has been removed. Mostly it is done by pressing but solvent extraction method is also used. Chocolate is prepared from seeds of an evergreen tree of the genus, Theobroma. After removing the seeds from pods and fermenting them to facilitate the removal of surrounding pulp, they are dried or cured. These are then roasted and further loosen the outer covering and develop the desirable flavour. After removing the hull and the germ the remaining part called nib is subjected to colloidal size and develops the texture which is characteristic of chocolate liquor called baker's chocolate.

Although liquor chocolate is superior in the taste and aroma cocoa perform quite adequately in bakery foods and is mostly used by bakers being considerably cheaper.

Fat content, particle size, colour, PH, moisture content, flavour and microbiological contamination are the quality control tests employed by the purchaser to check the product . It is more important to get fine ground cocoas for use in icings and fillings than for doughs batters. Very fine powder may be described as

0.5% move on 325 mesh screen. For batters 0.5% move on 200 mesh screen is satisfactory particle size.

Colour: Colour used in bakery products are purchased as compounded mixtures in liquid or gel form designed for easy measuring. Coloured products in the trade are restricted to decorative adjuncts made from yellow doughs. In addition to the natural colours chemically synthesized dyes and their lakes are also used. Lakes are water soluble dyes absorbed on insoluble substrates.

Caramel Colour: Caramel is extensively use in breads to impart peculiar colour and flue. It gives the baker flexibility in adjusting the colour without affecting it is manufactured by heat treating high DE corn syrup, in the presence of certain alkalis and is very dark syrup of about 1 lbs. per gallon density, having very low viscosity. Depending on the amount used, it imparts varying shades to the bakery products. The colour of finished products may range from light tarnish yellow to very dark brown. Amount to be used varies from 1 to 5% of the weight of flour.

Dough improves and yeast food: There are mixtures of several inorganic salts and starch flour. These ingredients have following functions to perform:

1. Gluten oxidising agents such as potassium bromate, potassium iodate, or calcium peroxide.
2. Calcium salts in the form of phosphates and sulfates, which correct hardness of dough water and provide some additional buffering action.
3. Ammonium salts to supply nitrogen in a form which can be used by yeast for protein building.

Following are some of the typical dough improver formulation.

Ingredient	%
1. Starch and moisture	40.49
Calcium Sulphate	24.93
Sodium Chloride	24.93
Ammonium	9.38
Potassium Bromate	0.27
2. Dicalcium Phosphate	90.00
Di-ammonium Phosphate	9.00
Calcium Peroxide	0.65
Starch	0.35
3. Mono Calcium Phosphate	50.06
Starch and Moisture	23.36
Sodium Chloride	19.35
Ammonium Sulphate	7.01
Potassium Bromate	0.12
Potassium Iodate	0.10

Amount to be used varies from 0.25 to 0.5% depending on the type of the product.

Inhibitors of Microbiological Spoilage: It is the mould growth spoilage with which baker is concerned. There are a number of chemicals used as fungicides by bakers. Sodium and calcium salts of propionic acid and sodium di-acetate are used with good results. Calcium or sodium propionate to the extent of 0.32% of the dough weight may be increased in the case of whole wheat or gram bread and rolls to about 0.38% on the basis of whole wheat flour used.

Oxidising Agents: Oxidising agents are added to the bakery product to produce larger volume increase, brighter crum, better texture and improved appearance of the finished loaf as a result of greater symmetry and darker crust. They have nothing to do with gas production but act by retaining the gases for the long periods. Potassium bromate is the most commonly used oxidising agent. Other chemicals like calcium peroxide and potassium bromate can also be used to some extent. All these three chemicals act differently. Potassium bromate acts in the later stages of processing cycle to shorten the fermentation time. Potassium iodate acts earlier than bromate at high pH value and give sometimes drier dough with improved machinability. Calcium peroxide gives more pliable and elastic dough which have a greater oven spring and can be taken with a somewhat smaller proof. It also increases absorption and must be added at the dough stage. Dough improvers, should not be incorporated in doughs prepared from flours which have been already aged or treated with oxidizers at the mill stage otherwise these may produce inferior quality bread. A larger amount of bromate may be needed when short fermentation time, low dough temperature, soft doughs, small addition of yeast, short times of fermentation

Time (hrs.)	3-5	4
Temperature	80-84	82

Manufacturing: Soda crackers are made from laminated doughs. For lamination or sheet making reversible dough brakes or automatic laminators are used. The number of sheets on one machine varies from plant to plant but is definitely not less than 6 or 7 to have the full benefit of automatic machine operation. The fermentation process is simple and similar to general yeast leavened products, however a few special considerations for soda crackers of which a baker should have knowledge are discussed here. In general acidity development and rate of gas evolution are dependent on temperature of sponge and is function of temperature at which the sponge is set and fermentation room temperature for a particular formulation. In addition it is also related to dough composition in the following manner:

1. Absorption: The greater is the percentage of water in composition, the faster is the fermentation.

2. Salt: This ingredient inhibits fermentation.

3. Sugars: Sugars added in form of sucrose, corn syrup or invert syrups are rapidly consumed by bacteria and yeast, both.

4. Amylolytic Enzymes: Mono-saccharides of the dough are first consumed by the yeast. After this almost quickest adaptation period starts and then maltose

split off from starch by amylolytic enzymes can be metabolized. Any losses are present in good quantity in malt and fungal supplements, however, flour also contains these enzymes.

The soda percentage shown in the formulation is only representative of typical formulations and correct amount should be determined based on the pH required in the baked crackers. Thus the sodium bicarbonate percentage in practical sense is related to the acid produced during fermentation. Acidity to be compensated for by addition of soda can be manufactured. For this P^H readings on the doughs can be used as a rough guide for soda supplementation. Although these are only indirectly related to acid development, the determination, total titratable acidity being difficult and time consuming, is invariably used in practice.

There is a loss of about 2.3% due to the evolution of ethanol and carbon dioxide during the fermentation process. It is desirable to keep this loss at a minimum without sacrificing the flavour and other desirable qualities. The only way to keep it at a minimum is by keeping fermentation time at the shortest possible length consistent with a quality cracker. Addition of ripe sponges or a fermented broth for flavour purposes are other possible approaches to minimising fermentation losses.

CHECK YOUR PROGRESS-III

Q.1 What is the use of egg in bakery?

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Q.2 Write short note on use of fruits and nuts in baked products.

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5.11 Cake Making

The basic ingredients of cakes are flour, shortening, eggs, sugar, and milk. Eggs will aerate approximately their own weight of flour and consequently if more flour than eggs is used a cake recipe baking powder must be added to aerate the surplus flour. Cakes are chemically leavened bakery products which depend on the reactions of sodium bicarbonate and leavening acids for the expansive effect exerted during baking. Other essential ingredients of the cakes are flour, sugar, milk, shortenings and eggs etc.

THE FLOUR: As is the case with all bakery products, flour serves as a basic structural element in the cakes also. However, the use of relatively smaller amounts of flour, the weaker (less extensible) protein in the soft wheat flours, which are customarily employed, and the lower amount of protein in the flour in a softer, crumblier, texture in cakes and other similar products. The protein of the flour is mostly inadequate in quantity and quality to support an expansion of the extent found in quantity and quality to support an expansion of the extent found in bread so that they are of higher density comparatively. Important specifications for some of the flours used in cakes are:

Soft Straight flour	%
Extraction	72
Ash (14% moisture)	0.38
Protein (14% moisture)	8.2
Soft Short patent flour	%
Extraction	35
Ash(14%moisture)	0.3
Protein(14%moisture)	7.5
Baker's Patent Flour	
Extraction	65
Ash(14%moisture)	0.34
Protein (14%moisture)	7.9
Extraction	10
Ash	0.68
Protein	9.9

Extraction of flour is based on wheat.

SUGAR: In cakes sugars have a tenderising effect and promote the colouring of the crust in addition to their sweetening properties. Invert sugars and glucose give better crust colour. Sucrose in contrast to the case with yeast leavened doughs of breads and rolls. Sugar strain moisture in crumb and thereby retard staling. Again due to their lower molecule weight and consequently greater osmotic effect glucose and invert sugars are more effective than sucrose on weight for weight basis. As the sugar concentration increases, the batter has a tendency to become more liquid and so entertain less air under these conditions.

SHORTENING: During the mixing operation shortenings act to entrap air in the cake batters. These air buddies not only contribute directly to the leavening effect but also help to control grain size by serving as foci for gas evolution. Shortenings also tenderize the crumb and may contribute slightly to the flavour of the product. Emulsified shortenings also contribute to tenderness and resistance to staling finished product.

EGG: The deficiency of the gluten in cake batters are remedied to some extent by using whites in the formulation. Proteins of the egg form the vehicle wall in combination with the gluten and permit the entrapment of the air during mixing. In case of angel food cakes the entire leavening effect is obtained from the air enclosed by the egg white during vigorous whipping. The egg proteins

themselves do not have sufficient mechanical strength to withstand oven expansion or handling after baking and do not contribute the texture desired in the cakes. These characteristics are obtained from the cakes only. Egg yolks contribute emulsifying and tenderising effects. Eggs also contribute flavour and are an important source of colour.

Milk: Due to its lactose content, which is a reducing sugar, milk performs the function of accentuating the crust colour. While skim milk makes the cakes cramp tougher, this effect is balanced by the lubricating or tenderizing action of milk fat in the case of whole milk.

Formulation Guidelines: Based on the flour weight sugar should be 110-180% in devils and chocolate layers, 110-160% in white layers and again 110-160% in yellow layers. Shortening should fall in the range rate should be 1.2% and salt 3-4% of the flour weight. Eggs as liquid eggs should be equal or exceed the shortening percentage. Total liquid including the water in the eggs is increased. Additional water is usually not added when formula contains dry milk, but if water in formulation is not sufficient to equal the reconstitution water for milk add about 1% of water for each additional percentage of milk solids. If the amount of sugar in a formula is increased the egg content should be increased on equal amount. Batter bake in large pieces size requires less water and less leavened than those baked in small piece sizes. Also such formulae need less chemical leavening because they incorporate more air during mixing. The batters display lower specific gravity and perform better at a lower baking temperature. Recommended temperature for cake batters is 360-400°F depending on the type, size and shape of the cake. It is essential to use high emulsifying shortening in cakes which have a high proportion of sugar to flour the so called high ratio cakes.

CAKE PROCESSING

1. Single stage mixing.
2. Two stage mixing.
3. Creaming method.
4. Blending
5. Sugar and Water method.

SINGLE STAGE MIXING: Single stage mixing process is the simplest of them all consists of during all of the ingredient into the mixer bowl and beating them with the wire whip or batter beater until they are homogeneous. Usually the batter is beaten at low speed for 1-3 min or until the dry ingredients have been wetted and then the mixer is turned to high speed or second near the end of mixing period or adding the eggs near the end with a total mixing time much reduced from the normal. The obvious advantage of this process is the saving of time which results. Disadvantages are said to be poorer grain texture and volume in the finished product.

TWO STAGE BATTERS: Two stage batters are mixed by placing of the dry ingredients and part of the liquid materials into the bowl and mixing until homogeneous or creamed mass results. The remainder of the liquids is then added, usually gradually, and the mixing completed. Variations in this method usually involve changes in the stage at which the eggs are added. The creaming

process requires that the sugar and shortening be beaten until a light and fluffy (creamed) mass is obtained. The eggs are then added while creaming is continued at medium speed, and finally the milk and flour are added alternately, in small portions. This method allows entrapment of a maximum number of small air bubbles in the fat with a consequent good effect on the grain in the finished product. It also does not develop the flour gluten as much as some of the other methods and this improves the texture of the cake somewhat.

THE BLENDING METHOD: The blending method requires the placing of flour and shortening in the mixing bowl and blending them together until the flour particles are thoroughly coated by the fat. The remainder of the dry ingredients is then added and the batter mixed until it is homogeneous. Finally, the remaining liquid is added in portions and the mixing continued for a predetermined period. A modification which is frequently used requires that the sugar and eggs be beaten together to form a foam before they are added to the flour and shortening mixture. The chief advantage of the blending method is that it permits a very thorough dispersion of the shortening throughout the batter. This results in a very fine and uniform grain. On the other hand, the blending method does require more time and the use of more equipment than for example, the single stage method. Player (1952) says that cakes made by this method are tougher and have lower volume.

COMMON FAULTS IN CAKES

1. Texture Defects: Under baking and improper cooling before packaging are common causes of gumminess, doughiness or chewiness. Toughness may be caused by using too strong a flour, overmixing, inadequate amounts of water, over mixing with consequent over development of the gluten, inadequate amount of water and shortening.

2. Defects of Crust Appearance: on homogeneous batter may cause spotted crust. The bubbles in the crust which may also produce spotted crust can also be caused by unsuitable type of leaveners, or batters which are too viscous or excessive oven heat. Crust bursting may also be caused due to high baking temperatures, or over mixing, too much flour or flour which is too strong. Low temperature baking may result in pale coloured crust and excessively high temperature baking may cause too dark coloured crusts. Dark coloured crust may also be caused due to the use of too much sugar particularly the reducing sugars. Pale crust colour may also result from under scaling with resultant shielding of the top crust from the radiant heat by the pan sides.

3. Too low volume: Insufficient shortening in the formulation may cause low volume of the cakes. Under mixing may also result in low volume due to the reduced aeration of the batter. Improper balance of ingredients on their improper type especially the flour and the shortening can also reduce the expected volume markedly. Also if the batters allowed standing too long at too high a temperature, an initially adequate leavening action may be lost as a result of premature reaction of the bicarbonates and the leavening acids.

4. Irregular or coarse Grain: Some ingredients, particularly the dried milk, solids, when improperly stored, will form agglomerates which are indestructible by the usual mixing procedure and this may result in the presence of undissolved spots of material in the crumb. Under baking may cause wet streaks. Too cold an oven can cause the grain to be open. Excessively high bottom heat during baking may produce tunnels and large holes at the bottom of the cake. Both under mixing and over mixing can create a coarse, open grain in the finished product.

CAKE ICINGS

These are the materials used for decoration of cakes and bakery products. Consistency i.e. coherence and firmness or the ability to be spread and to stay firm are the properties desired of these products. As these are the sweet covering or coatings in which sugar is the main constituent. Sugar and water are main ingredients of icings. In the manufacture water dissolves some of the sugar crystals to form syrup which surrounds and holds together the other particles.

Some Guidelines for Icing Preparation: The time of setting in an icing depends considerably upon its moisture content. Icing with less of water set more quickly, therefore it is good practice to use least amount of water. Flat icings, e.g. plain water icings should contain 11 to 13% water, those with large amount of fat should contain less and those with water absorbing materials e.g. cocoa, more icing containing gelatine or eggs should be made with 15 to 21% of water content.

It is difficult to easily handle thickening, it is good practice to add a little of sugar syrup or keep it warm rather than to add water. On warming the syrup and the fats become more fluid, allowing sugar crystals to slide by each other more easily. Of course this is not applicable to icings made fluffy by shortening.

For dipping purposes, flat icing can be made thin by adding sugar syrup made up of 2kgs. of sugar dissolved in 1 kg of water. Warming the icing to about 100°f also make it thin. Warmed icings needs less or no extra syrup for thinning and therefore set more quickly and require less time for surface drying.

Flavours Development in Icings: By bringing few changes in formulation and manufacturing technique different flavours can be developed icings for variety. For instance, caramel flavour is developed by making two changes in a cold processing made of water and sugar. Milk is used instead of water and part of sugar is replaced by brown sugar. Again, sugar and milk are cooked to develop universally appealing caramel flavour. To obtain the flavour of butter scotch, milk is replaced by butter. By blending sugar, butter and milk together and cooking the blend, a rich flavour of cream of fudge is obtained. When chocolate and milk are combined in the formulation milk chocolate is obtained.

Fluffy Icings: When butter and creamy fats are creamed with powdered sugar, they take on the air. Whole eggs, egg yolks or egg whites are also added for smoothness and loudly and to help water mix more readily with fat. The light and fluffy icing so produced when applied make the cakes look larger and also the increase in bulk alters the consistency and makes the operations easy. For cold

process fluffy icings dried egg white, which has been dissolved previously or whole egg white is simply beaten with icing sugar.

RECIPES FOR VARIOUS TYPES OF ICING

Chocolate Icing

Chocolate powder	100 gms
Confectioners sugar	500 gms
Vanilla essence	a few drops or as desired
Water	20 gms or as required

Blend chocolate and about 100 gms of sugar in a container. Now take rest of sugar in separate container and add warm water in such an amount that the resultant mixture when mixed produced a cream-like product. Add vanilla essence and mix again. Take this container in hot water bath and add slowly the previously prepared blend of chocolate and sugar in small amount with continued stirring. To get the final product of creamy consistency a little of water may also be added. When whole of the blend has been added continue mixing for few minutes and cool slightly. The icing is now ready for decoration.

Batter Icing

The icing in addition to the decoration can also be used for filling purposes. The Formulation is:

Confectioner's sugar	450 gms.
Butter	350 gms.
Flavour and colour	as desired

Sugar and butter are mixed thoroughly to obtain a consistent creamy product, flavour and colour is then mixed, the icing is ready.

Water Icings

This is a mixture of confectioner sugar and boiling water, with flavour and colour as desired. Boiling water is slowly added to the sugar with continuous stirring to obtain workable consistency cream. Flavour and colour are next mixed. This is a soft type of icing is also prepared from sugar and water with a difference that warm water is used instead of boiling water. This icing should be used immediately after preparation and not kept for a long time. For cake size 20 cm. about 100 gms. Of icing will be required for decoration.

Royal Icing

Ingredients

Confectioners sugar	300 gms
White of egg	2 nos
Lemon juice	1 ml
Glycerin	1 ml
Colour	as required

White of egg should be separated carefully from the rest of the portion otherwise whole of the icing may get spoiled. Beat the white of the eggs till it is hard. Now add to it lemon juice and again beat to obtain a thick and light mass. Mix this mass and the sugar thoroughly along with the required colour to make the icing. Care should be taken to keep all the containers used in the preparation away from the contact with any shortening.

Icing Paste (General)	%
Confection's sugar	60
Corn syrup	30
Glycerine	8
Shortening	2
Total	100

The materials are melted in heated and stirred vessel and stirring continued till cold. Colour and fruit flavour are then added to obtain desired flavoured icing cream.

Vanilla Icing

Sugar (powder)	26 kgs.
Corn syrup	1.0kg
Egg white	800 gms.
Hot water	5.0 lit
Vanilla bean extract	175 gms.

The icing is prepared as the icing paste explained above.

Butter Scotch Icing

Brown sugar	3.6 kgs.
Butter	900 gms.
Corn syrup	175 gms
Water	3.2 lit.

Boil all the ingredients in a copper kettle upto 245 of and transfer to a shallow pan and cool. When cold mix up in mixing bowl and grain off.

Butter Scotch paste Icing

Brown sugar	10 kgs.
Skimmed milk powder	4 kgs.
Butter	5 kgs.
Water	8 lit.

Mix together dried milk, powder and water.

Scorch the butter in a kettle, add brown sugar and sur. Heat to 260 of and to thin hot syrup add milk, prepared as above, and again cook cup 230of , stirring continued vigorously.

Banana Icing

Mix and whip together:

Cake flour	5 kgs
Shortening	10 kgs
Slat	300 gms

And add about 8 litres of water continuing mixing. Then add 50 kg of confectioner's sugar and 10 kgs. of banana paste and mix upto a good consistent light icing .

Caramel Boiled Icing

Boil together 6 kgs. brown sugar and 2 kgs. water to a temperature of 240 of . Take 2 kgs. egg white, one kilogram sugar and 60 gms.of salt. Start egg white beating when syrup reaches 200 of . Beat half way up and add sugar , salt and beat well till the icing is firm.

Honey Macaroon Icing

Cream the following ingredients in a mixing machine.

Shortening	1 kg.
Skim milk powder	200 gms.
Salt	35 gms.

Mix together the following separately.

Honey	325 gms.
Brown sugar	1 kgs.
Water	800 gms.
Vanilla	as desired

Blend first and second, mix together and add 1 kg. of confectioner's sugar and whip whole to the light consistency.

Spice cake Icing

The formulation for one of the old fashioned spice cake icing is:

Sugar	5 kgs.
Shortening	1.25 kgs.
Salt	65 gms.
Spice blend	45 gms.
Skim milk powder	250 gms.
Pastry flour	250 gms.

Place all the ingredients in mixing machine and cream at high speed for about 10 minutes Add ground raisings 275 gms. and again mix for about 2 minutes until consistent icing is obtained .

Butter Cream Icing

Mix up the following ingredients:

Sugar powdered	10 kgs.
Milk Powder	2 kgs.
Shortening	5 kgs.
Eggs	0.70 kg.
Vanilla Flavour	as desired
Salt	90 gms.

Add to the above mix about 10 kgs. of boiled meringue icing.

5.12 Qualities In Baked Products

Texture is the term used to describe the characteristic of a finished food product. Variety includes some hard and soft food in meal, so that the amount of chewing required is varied. This is the one of the point that is considered while planning a menu. The menu includes dishes that have different textures as soft, crisp, hard, smooth etc. All the mentioned factors contribute to the concept of texture. The texture, as related to food is not an entity in itself, but rather the accumulated effect of several characteristics such as:

- ✓ Appearance
- ✓ Feel to touch
- ✓ Softness
- ✓ Mouth feel

Appearance: This is the first factor in the appreciation of the food. The size, shape and distribution of cells are of prime importance. Ideally the holes should be comparatively small, slightly oval or elongated and evenly distributed. Large cells (holes) produces coarseness to the eye, as in cake and breads.

Feel to Touch: The perceptiveness to touch should be exact as it is desired to be. E.g. a sponge cake should be light and spongy.

Softness: It is the characteristic of texture and the product should possess the resiliency (springiness) to gradually return to its normal shape as soon as pressure applied is released. Ex. Idlis, Breads etc.

Mouth Feel: Texture involves feels or bite tenderness Ex. Dry, soft, wet, hard, firmness, crumbliness and short. Observation, experience, preparing foods, by adding ingredients and incorporating and applying the right principles (combining, mixing, fractionation etc.) has a definite bearing in the result.

TYPES OF TEXTURES

Firm and Close: Raising agents added raise the food, the volume is increased. The holes are small and many. The products are crisp and not spongy. E.g. Biscuits, Tartlets etc.

Short and Crumbly: The product is short and it just melts in the mouth, when eaten. The right quantity of fat added gets this effect. More fat is added, as it prevents the mixture from becoming hard and short. It is very similar to firm and close texture. E.g. Shortbread, Nankhatai, Biscuits, Short crust pastry etc.

Light and Even: There are plenty of holes of more or less the same size. It is less short than pastry and less spongy than a sponge cake. The product is firm to touch. E.g. Madeira, Queen cakes etc.

Spongy : The holes (air cells) are small and evenly distributed. as air has been included. It is soft and elastic to touch as in Idlis, Khaman, Dhokla, Swiss rolls etc.

Flaky: The products have thin crisp flakes and they are formed by air pockets. The crispness is due to the method of rubbing fat with the flour. In order to get a good flaky texture, the right amount of ingredients. Proper mixing and correct temperature is essential. E.g. Vol-au-vent, Patties, Bouchees, Paratha, Tikona, Mathis etc.

Smooth: When a dry ingredient is added to a liquid and the blending results in a smooth texture. E.g. Sauces. Batters. Gravies, Phirnees.

5.12 Summary

In this unit we have discussed about various ingredients that are used in the bakery such as flour, sweetening agents like Corn starch, Sucrose and other sweeteners; leavening agent like Chemical leavening agents, Biological

leavening agents, Mechanical leavening agents, Water vapour, and Combination; Milk products and its Constituents along with production of milk powder; other ingredients like Egg, Fruits and Nuts, shortening and flavours and colours discussed in detail. The cake making and icing for cakes are discussed in the last section of the unit.

5.13 Answer to Check Your Progress

Check Your Progress-I

Q.1 Refer to section 5.3.1.1

Q.2 Refer to section 5.3.1.3

Check Your Progress-II

Q.1 Refer to section 5.4

Q.2 Refer to section 5.5

Check Your Progress-III

Q.1 Refer to section 5.7

Q.2 Refer to section 5.8

5.14 References/Bibliography

1. Wayne Gisslen, Professional Baking, John Wiley & Sons, Inc.
2. S C Dubey, Basic Baking.

5.15 Terminal Questions

1. Write detailed note on various ingredients used in bakery.
2. What are the various types of bakery flour?
3. Write a detailed note on use of yeast as leavening agent.
4. Write a short note on icing.
5. What are different fruits used in baking?

UNIT 06: METHODS OF COOKING

Structure

- 6.1 Objectives
- 6.2 Introduction
- 6.3 Heat and Cooking
 - 6.3.1 What is heat?
 - 6.3.2 Effect of Heat on food
 - 6.3.3 Method of heat transfer
- Check your Progress-I
- 6.4 Methods of cooking
- 6.5 Moist heat Methods of Cooking
 - 6.5.1 Boiling
 - 6.5.2 Poaching
 - 6.5.3 Steaming
 - 6.5.4 Stewing
 - 6.5.5 Braising
- 6.6 Dry heat Methods of Cooking
 - 6.6.1 Baking
 - 6.6.2 Roasting
 - 6.6.3 Grilling
- Check your Progress-II
- 6.7 Frying
- 6.8 Modern Methods of cooking
 - 6.8.1 Paper Bag (en papillote)
 - 6.8.2 Microwave Cooking
- Check your Progress-III
- 6.9 Summary
- 6.10 Answer to check your progress
- 6.11 Terminal Questions

6.1 Objectives

After reading this unit the learner will be able to understand:

- Methods of heat transfer
- Effect of heat on food
- Moist heat Methods of Cooking
- Dry heat Methods of Cooking
- Frying
- Modern Methods of cooking

6.2 Introduction

This chapter deals with basic principles. You will learn about what happens to food when it is heated, about how food is cooked by different methods, and about rules of seasoning and flavouring. It is important to understand the science of food and cooking so you can successfully use these principles in the kitchen.

6.3 Heat and Cooking

To cook food means to heat it in order to make certain changes in it. Skillful cooks know exactly what changes they want to make and what they have to do to get them right. To learn these cooking skills, it is important for you to know why foods behave as they do when heated. For this, you have to study the theory. Perhaps not all of this section will make sense to you at first. But the ideas should become clearer to you after you think about them in relation to specific techniques, as demonstrated by your instructor. Later in your studies, when you are learning about cooking meats, fish, vegetables, and other foods, review this section from time to time. Not only will you understand it better but also it should help you make more sense of the procedures you are learning and practicing.

6.3.1 What Is Heat?

Heat is a form of energy associated with the motion of atoms or molecules. When a substance absorbs heat, its molecules move faster. In liquids and gases, the molecules move more quickly from place to place and bounce off each other more frequently. In solids, the molecules stay mostly in place, but they vibrate with more energy. Temperature can be defined as a measure of this molecular activity. The higher the temperature, the faster the molecules are moving. When we add enough heat to foods, the molecules may move so fast the structure of the food changes. For example, sucrose (regular sugar) may break apart and form new molecules that happen to have a brown colour and the taste of caramel. Or protein molecules may break apart and reform with a different structure. Creating these molecular changes is called cooking.

6.3.2 Effect of Heat on Food

Foods are composed of proteins, fats, carbohydrates, and water, plus small amounts of other compounds such as minerals (including salt), vitamins, pigments (colouring agents), and flavour elements. It is important to understand how these components react when heated or mixed with other foods. You will then be better equipped to correct cooking faults when they occur and to anticipate the effects of changing cooking methods, cooking temperatures, or ingredient proportions. The following discussion is concerned with the physical and chemical reactions that affect the components of food.

Carbohydrates : Starches and sugars are carbohydrates. Both compounds are present in foods in many forms. They are found in fruits, vegetables, grains, beans, and nuts. Meats and fish also contain a small amount of carbohydrate. For the cook, the two most important changes in carbohydrates caused by heat are caramelisation and gelatinization. **Caramelization** is the browning of sugars. The browning of sautéed vegetables and the golden color of bread crust are forms of caramelization. **Gelatinization** occurs when starches absorb water and swell. This is a major principle in the thickening of sauces and in the production of breads and pastries. Acids inhibit gelatinization. A sauce thickened with flour or starch will be thinner if it contains acid.

Fruit and Vegetable Fibre: Fibre is the name for a group of complex substances that give structure and firmness to plants. Fibre cannot be digested. The

softening of fruits and vegetables in cooking is, in part, the breaking down of fibre. Sugar makes fibre firmer. Fruit cooked with sugar keeps its shape better than fruit cooked without sugar. Baking soda (and other alkalis) makes fiber softer. Vegetables should not be cooked with baking soda because they become mushy and lose vitamins.

Proteins: Protein is a major component of meats, poultry, fish, eggs, milk, and milk products. It is present in smaller amounts in nuts, beans, and grains. Proteins consist of long chains of components called amino acids. These chains normally form tight coils. As proteins are heated, the coils gradually unwind. At this point, the protein is said to be denatured. For the cook, the important fact about denaturing is that, when the protein coils unwind, they become attracted to each other and form bonds. This bonding is called coagulation. The coagulated proteins form a solid network of bonds and become firm. As the temperature increases, the proteins shrink, become firmer, and lose more moisture. Exposure of proteins to excessive heat toughens them and makes them dry. Most proteins complete coagulation or are cooked at 160°-185°F (71°-85°C). Many protein foods, such as meats, contain small quantities of carbohydrate. When proteins are heated to about 310°F (154°C), the amino acids in the protein chains react with the carbohydrate molecules and undergo a complex chemical reaction. The result is that they turn brown and develop richer flavours. This reaction is called the Millard reaction. It is what happens when meat browns. Because of the high temperature it requires, the Millard reaction takes place only on the dry surface of the food. Because of its water content, the interior of the meat cannot get this hot. Connective tissues are special proteins present in meats. Meats with a great deal of connective tissue are tough, but some connective tissues are dissolved when cooked slowly with moisture. Cooking tough meats properly, therefore, makes them tenderer. Acids, such as lemon juice, vinegar, and tomato products, have two effects on proteins:

- They speed coagulation.
- They help dissolve some connective tissues.

Fats: Fats are present in meats, poultry, fish, eggs, milk products, nuts, whole grains, and, to a lesser extent, vegetables and fruits. Fats are also important as cooking mediums, as for frying. Fats can be either solid or liquid at room temperature. Liquid fats are called oils. When solid fats are heated, they melt, or change from solid to liquid. The melting point of solid fats varies. When fats are heated, they begin to break down. When hot enough, they deteriorate rapidly and begin to smoke. The temperature at which this happens is called the smoke point, and it varies by type of fat. A stable fat-one with a high smoke point-is an important consideration in deep-fat frying. Many flavour compounds dissolve in fat, so fats are important carriers of flavour. When fats melt and are lost from food, some flavours, as well as some vitamins, are lost with them.

Minerals, Vitamins, Pigments, And Flavour Components: Minerals and vitamins are important to the nutritional quality of the food. Pigments and flavour components are important to a food's appearance and taste and may determine whether the food is appetizing enough to eat. So it is important to preserve all these elements. Some of these components are soluble in water, and others are soluble in fats. All of these components may be leached out, or dissolved away,

from foods during cooking. Vitamins and pigments may also be destroyed by heat, by long cooking, and by other elements present during cooking. It is important, then, to select cooking methods that preserve, as much as possible, a food's nutrients, taste, and appearance. This is addressed whenever cooking techniques are explained in the remainder of this book.

Water: Nearly all foods contain water. Dried foods may contain as little as a fraction of 1 percent water, but fresh meats, fish, vegetables, and fruits consist mostly of water. Water exists in three states: solid (ice), liquid, and gas (water vapour or steam). At sea level, pure liquid water becomes solid, or freezes, at 32°F (0°C) and turns to steam at 212°F (100°C). When water molecules turn to steam and energetically escape into the atmosphere, water is said to be boiling. Water can also turn from liquid to gas at lower temperatures. When water turns to gas at any temperature, the process is called evaporation. Evaporation occurs more slowly the lower the temperature is. Evaporation is responsible for the drying of foods. The drying of food surfaces as they are cooked enables them to be browned. Many minerals and other compounds dissolve in water, so water can be a carrier of flavour and of nutritional value. When water carries dissolved compounds, such as salt or sugar, its freezing point is lowered and its boiling point is raised.

6.3.3 Method of Heat Transfer

There are three methods to transfer heat:

1. Conduction
2. Convection
3. Radiation

Conduction: This is the transfer of heat through a solid object by contact. Some materials are good conductor while some are bad. Some material can retain heat like ceramics, iron while some materials can not such as copper.

Convection: Convection involves the transfer of heat in liquid and gases. Convection of air and Convection of liquids

Radiation: Radiation involves the transfer of heat by electromagnetic waves such as infra-red and microwaves. When this wave passes through food, loses some of its energy in form of heat.

CHECK YOUR PROGRESS-I

Q.1 What is effect of heat on carbohydrate?

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Q.2 What is heat?

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Q.3 What are the different methods of heat transfer?

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6.4 Methods of Cooking

Different cooking methods are suited to different kinds of foods. For example, some meats are high in connective tissue and are tough unless this tissue is broken down slowly by moist heat. Other meats are low in connective tissue and naturally tender. They are at their best and juiciest when cooked with dry heat to a rare or medium-done stage.

Many other factors must be considered when choosing cooking methods for meats, fish, and vegetables, such as the flavour and appearance imparted by browning, the flavour imparted by fats, and the firmness or delicacy of the product. These factors are discussed in later chapters with respect to individual foods. Cooking methods are classified as moist heat or dry heat.

- **Moist-heat methods** are those in which the heat is conducted to the food product by water or water-based liquids such as stock and sauces, or by steam.
- **Dry-heat methods** are those in which the heat is conducted without moisture—that is, by hot air, hot metal, radiation, or hot fat. We usually divide dry-heat methods into two categories:
 - Without Fat
 - With Fat

6.5 Moist Heat Methods of Cooking

Moist-heat methods are those in which the heat is conducted to the food product by water or water-based liquids such as stock and sauces, or by steam. Following are the moist heat method of cooking:

- Boiling
- Poaching
- Steaming

- Stewing
- Braising

6.5.1 Boiling

Boiling is cooking of prepared food in a liquid at boiling point. The liquid be water, court-bouillon, milk or stock. The Purpose of Boiling Food Is:

- Pleasant taste & agreeable flavour
- Suitable texture
- Easy to digest and safe to eat.

There is Two Way of Boiling:

1. Place food in boiling liquid, re-boil and then reduce heat. (Simmering)
2. Cover the food with cold liquid, boil and then reduce the heat.

NOTE: Court-bouillon is fish cooking liquid prepared by simmering sliced carrot, sliced onion, parsley stalk, sprig of thyme, salt, bay leaf, vinegar and peppercorn in water for 30-40 minutes and then strained.

Effect of Boiling

- Gentle Boiling Break down tough fibers (tenderize)
- Tough connective tissues of meat Soluble gelatin
- Coagulation of Protein without hardening.

Advantages of Boiling

- Tougher and Older joints of M P palatable & digestible
- Appropriate for large-scale cooking and economic to fuel]
- Nutritious, well-flavored stock can be produced

Food added to Boiling Liquid

- Suitable for green veritable as they can retain maximum colour, and nutrition (if boiling is for minimum time)
- Seals the natural juices in meat.

Food added to Cold Liquid

- Helps to tenderize and extract maximum flavour
- Avoid damage to shape of food

Time and Temperature Control

- Temperature must be controlled to avoid over cooking
- Although approximate cooking time for most foods, the age, quality and size of food will also affect the cooking time.

General Rules

- Select pans which are neither too small or too large
- While adding food to boiling liquid ensure sufficient liquid is there at boiling point
- Frequently skimming
- Simmer to minimize evaporation of cooking liquid

Safety

- Select containers of right capacity

- Move pans of boiling liquid with care
- Position of handles
- Extra care while adding or removing food

Parboiling

- Parboiling is the boiling the food until it is only partially cooked
- The food is placed in boiling liquid for short time so that it's outside becomes soft
- The cooking process is the completed by using another method
- Use for quantity cooking

Blanching

- It is not strictly a method of cooking
- Blanching means placing food in boiling liquid for 1 to 2 minute and the refresh with cold water.
- This method is used to remove skin from tomato, fruits and nuts
- This helps to prepare vegetables and fruit for freezing.
- It destroys enzyme and help to retain colour and nutrition by sealing surface.

Disadvantages of Boiling

- Flavours and colour of food in cooking liquid
 - Loss of water soluble vitamins and nutrients.
-

6.5.2 Poaching

Poaching is the cooking of food in the required amount of liquid at just below boiling point. Purpose of Poaching

- Easy to digest
- To get suitable tender texture
- Pleasant to eat as appropriate sauce is made from cooking liquid

Two Ways of Poaching

- Shallow poaching
- Deep poaching

SHALLOW POACHING

- The food cooked in this method is covered in minimum amount of cooking liquid
- Never allowed to boil (Temperature below 100C)
- To prevent boiling complete cooking in a moderately hot oven

DEEP POACHING

- Food cooked in this method covered with more water. E.g.. Poaching of eggs.(8Cm.or 3" water cover)
- Poaching is ideal for food like Fish, Egg, Fruit and delicate vegetable such as Asparagus

Effects of Poaching

Poaching helps to tenderize the fibrous structure of the food, and the raw texture of the food becomes edible by chemical process.

Method of Poaching

- Heat liquid to boiling point then reduce the temperature
- Gently lower the food in cooking liquid.
- Allow the food to remain in liquid until cooked.
- Remove the food and reserve the liquid if it is to be used for sauce.

Principles of Poaching

- Cooking liquid kept below BP (to avoid damage to food)
- Sufficient quantity of liquid (to prevent uneven cooking)

Advantages of Poaching

- Food with delicate texture is cooked without breaking up
- Poached foods are easy to digest
- Addition of fat is not required (Good for health conscious)

Disadvantages of Poaching

- Not suitable for large pieces of food
- Some flavour and nutrients are lost in cooking liquid
- Little development in colour and flavour

6.5.3 Steaming

Steaming is the cooking of prepared foods by steam (moist heat) under varying degree of pressure. Purpose of Steaming

- Easy to digest
- To get edible texture
- Pleasant to taste
- Retain maximum nutrition

Methods of Steaming

1. Atmospheric or Low pressure steaming
 - DIRECT - Cooking food in steamer of a pan of boiling water
 - INDIRECT - Between two plates over a pan of boiling water
2. High pressure steaming
 - There is a equipment built such that it does not allows steam to escape, therefore pressure of steam is built up, thus increasing the temperature and reducing the cooking time.

Vacuum Cooking In Pouch

- This is also known as sous-vide
- Food sealed in vacuum pouches and cooked by steam

Advantages

- Minimum change in texture
- Minimum weight loss
- No drying out and minimal colour loss
- Garnishing can be done before vacuum packing & Cooking
- Food is cooked in it's own natural juices
- Labour saving and uniformity of standards

Steps of Steaming

- Principles of Steaming
- Smaller pieces of food are suitable for steaming
- Doors of steamer should be closed
- Green vegetables are not suitable (Colour will distort)
- Potato & Root vegetable to be cut and placed on tray

Pressure Cooking

- Pressure cooking makes use of steam from water boiled in sealed container of oven (Pressure cooker).
- Boiling point of water varies with pressure.
- At atmospheric pressure water boils at 100°C
- With increase of pressure Boiling Point of water increases
- In this method pressure in side the cooking container is increased which results in increasing Boiling Point of water which in turns gives more heat to food and food is cooked early

Procedure of Pressure Cooking

- Check the water level in cooking container.
- Ensure tight seal
- Use perforated tray for vegetable
- When cooking is complete allow the pressure to return to normal pressure

Advantages of Steaming

- Less loss of nutrients from food
- Food retains maximum colour and flavour
- Cooking time is reduced
- Fuel saving

Disadvantages of Steaming

- Steaming is slow (If Pressure cooker is not used)
- Steaming does not allow much development of flavour

6.5.4 Stewing

"Stewing is the slow cooking of food cut into pieces and cooked in the minimum amount of cooking liquid, the food and the liquid are served together"

- A tight-fitting lid must be used during cooking to retain the juices and flavour.
- The temperature is held at simmering point over an extended period.

Types of Stews

Types of stewing is charted as under:

White	Blanquette	White meat is cooked in a suitable stock from which the sauce is made
	Fricassée	White meat is used and milk is added to maintain a white colour in the stew
Brown	Ragoût	Red meat is used, it is fried first to develop brown colour and flavour, stock and or red wine is used as cooking liquid
	Navarin	Refers to rich dark lamb stew

Vegetable	Ratatouille	Vegetable stew containing tomatoes, onion eggplant, capsicum and Zucchini
Fish	Bouillabaisse	Stew of fish, mussels etc. simmered with herbs

Advantages of Stewing

- Nutrients and flavours which escape in cooking liquid during cooking is retained as cooking liquid is also served with the food
- There is very little loss of nutrient as cooking is done at simmering point, which prevents the loss of vitamins
- Tough and older cuts of Meat and Poultry is tenderize
- This is suitable for bulk cooking
- This method is economical

Principles of Stewing

- The meat and vegetables are normally cut into bite-size pieces (helps even cooking)
- The meat is often fried prior to stewing (it develops the flavour and colours the sauce)
- Some times white meat is blanched (to remove any impurity which may discolour the sauce)
- Seasoning and flavouring are added to the cooking liquid (to enhance the taste of sauce)
- Cooking time should be long and slow (This enables tougher cuts to tenderize)

Disadvantages of Stewing

- Stewing requires longer cooking time.
- If correct process is not followed, result in high rate of evaporation of cooking liquid which will lead to toughening of protein fibbers in meat
- This is a slow cooking method

6.5.5 Braising

"Braising is a method of cooking in the oven; unlike roasting or baking, the food is cooked in liquid in covered pan, casserole or cocotte. This is combination of stewing and pot roasting"

Purpose of Braising

- To give variety to menu and diet
- Food becomes tender, palatable, digestible & safe to eat
- To produce and enhance flavour, texture, and eating quality of food

Methods of Braising

There are two methods of Braising

1. Brown Braising
2. White Braising

Brown Braising: Joints and portioned size meat is marinaded, larded and sealed by browning on all side in oven. Sealing helps to retain flavour, nutrition and good brown colour. Joints are then placed on bed of root vegetables in a

braising pan with liquid and other flavourings and then covered with lid and cooked slowly in oven.

White Braising: White braising is used for vegetables and sweetbreads. Food is blanched, refreshed and cooked on bed of root vegetables. Food is then placed in a covered pan with white stock and placed in oven.

Advantages of Braising

- Tougher and less expansive meat and poultry can be cooked using this method
- Maximum flavour and nutrition can be retained
- It gives a variety to food presentation and menu

1.6 Dry Heat Methods of Cooking

Dry-heat methods are those in which the heat is conducted without moisture—that is, by hot air, hot metal, radiation, or hot fat. We usually divide dry-heat methods into two categories: without fat and with fat. Dry heat methods of cooking are as under:

1. Baking
2. Roasting
3. Grilling

6.6.1 Baking

"Baking is cooking of food by dry heat in an oven in which the action of dry heat is modified by steam"

Purpose of Baking

- To make food palatable, digestible and safe to eat
- To create eye-appeal through colour and texture
- To produce an enjoyable eating quality
- To lend variety in the menu card

Effect of Baking

There is chemical action on ingredients like sugar, yeast, baking powder etc. Changes the raw structure of food which depends upon the different ingredients and ways of mixing the same.

Principles of Baking

- The conventional convection oven should be pre-heated (This gives the correct starting temp.)
- Products should be placed evenly in the oven (This allows the even hot air circulation)
- Products should be placed in greased or lined tins or tray (Helps to remove finished food easily)
- Items taking long time should be placed in lined tin at lower shelf (prevent drying & burning of crust)

Dry Baking

- In this method when food is placed in pre-heated oven, steam arises from water content of food, this steam combines with the dry heat of the oven is used to cook food.
- Using this method Cakes, Pastry, Baked jacket potatoes etc. are prepared.

Baking With Increased Humidity

In this method while baking the humidity of oven is increased by placing a bowl of water or injecting steam thus increasing water content in food which improves eating quality of the food. This is used to bake bread.

Baking With Heat Modification

In this method food is placed in container. Food items such as egg custard is baked in this way, this prevents the over cooking of food.

Advantages of Baking

- A wide variety of sweet and savory food is prepared
- Baking yields appetizing, eye-appealing food with mouth watering aroma
- Uniformity in color and degree of cooking can be achieved even in bulk cooking
- Temperatures can be effectively controlled
- Adding and removing food for baking is very easy

General Rules

- Oven should always be pre-heated
- Accuracy is essential in measuring and weighing and controlling temperature
- Trays and moulds should be greased or lined
- Once process of baking starts minimize the opening the doors of oven
- Use thick dry oven mitts while placing or removing food in oven
- Trays and oven should not be overloaded
- One should be very careful while placing food in oven and while removing the same

6.6.2 Roasting

"Roasting is to cook food over a source of radiant heat such as on spit, open fire or oven". Now the term roasting is also used to describe cooking of food in an oven with the addition of fat or oil. Thus oven roasting is a combination of convection and radiation.

Types of Roasting

1. Oven Roasting
2. Spit Roasting
3. Pot Roasting
4. Tandoori Cooking

Oven Roasting

It is cooking food in an oven. In this method hot convection of air is produced inside the oven which is responsible for cooking of food. Heat conducted from the

base of cooking try is responsible for browning of food which is desirable with some food e.g. Potatoes, where a crisp golden brown colour is required.

Spit Roasting

Food is cooked over spit (live charcoal) or open fire. Food is rotated slowly over the source of heat, and is cooked by radiant heat and convection of air depending upon the position of food in relation to fire. Usually large joints of meat are cooked by this method. This method produces its own distinct colour, flavour and texture in cooked food.

Pot Roasting

Pot roasting is cooking food on bed of root vegetable in a covered pan. This is not a true roast as moist heat (steam) trapped under the lid of closed utensil is used to cook the food. This method is also known as POËLÉ. Using this method will result in retention of maximum flavor of ingredients.

Tandoori Cooking

Tandoori cooking is done in a clay oven known as tandoor using dry heat. Although the source of heat is at the base of the oven but heat is evenly distributed as clay radiates heat evenly.

Method

- The marinated food (marinating may be done 20Min to 2 Hr. in advance depending upon the type of food) such as meat, fish & poultry is placed vertically in side the oven.
- Naan etc are slapped on the wall of the tandoor
- The temperature of tandoor is 375⁰C or 700⁰F

Advantages of Roasting

- Good quality of meat and poultry is tenderized and succulent when roasted
- Meat juices oozing from the joints are used for gravy and enhance flavor
- Energy and oven temperature can be controlled
- Ovens with transparent doors enables cooking to be observed
- Access, adjustment and removal of food is very easy
- This method involves the minimum risk of Fire

6.6.3 Grilling

This is a fast method of cooking by radiant heat and is also known as "Broiling".

This is of following four types.

- Over heat
- Under heat
- Between heat
- Barbecuing

Over Heat: Food is cooked over hot grill bars. Grill bars are pre-heated and brushed with oil otherwise food will stick to the bars. The cooking time will depend upon the thickness of food and temperature of grill bars.

Under Heat: The source of heat to cook the food, is over the food (salamander)

Between the Heat: This is grilling the food in between electrically heated grill bars or plates. This method is used for small cuts of meat

Barbecuing: This is grilling of food on pre-heated, greased bars over fierce heat (gas, Charcoal or wood) when solid fuel is used care should be taken that food is placed on bars when flame and smoke dies out. Food is marinated a brushed with barbecue sauce during cooking

Advantages of Grilling

- Speed of grilling enables the food to be cooked to order
- Charring of food gives a distinctive appearance and flavor
- Control of cooking is aided because food is visible while cooked
- Variety is given to menu and diet
- Grill may be suitable in view of customer

CHECK YOUR PROGRESS-II

Q.1 What are the dry heat methods of cooking?

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Q.2 What are the moist heat methods of cooking?

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6.7 Frying

Frying is a quick method of cooking food in hot oil or fat. Frying gives a good flavour and colour to food. It is of following two type:

- Shallow frying
- Deep frying

Shallow Frying: Shallow frying is the cooking of food in a small quantity of pre-heated fat or oil in a shallow pan or flat surface. This is of following type:

- Shallow frying
- Sauté
- Griddle
- Stir fry

Shallow Frying: Food is cooked in small amount of fat/oil in a fry/sauté pan. This is used to cook small cuts of fish, meat and poultry.

Sauté: Tender cuts of meat and poultry are cooked by this method. After cooking fat is discarded and pan is deglazed with stock or wine to prepare sauce.

Griddle: Food can be cooked on a griddle (a solid metal plate).

Stir Fry: Vegetables, strips of beef, chicken etc. are fast fried in wok with little oil or fat.

DEEP FRYING

This is the cooking of food in pre-heated deep oil/fat/clarified butter. Fried foods are often coated before frying.

Coating improves

- The appearance of food
- Food retains its shape
- Prevents fat soaking by forming crust
- Enhances the taste of food
- Prevents direct contact of hot fat/oil to food

COATING FOR FRIED FOOD

- **Seasoned flour** (plain flour + salt + pepper) for foods such as sausages, hamburger and fish
- **Seasoned flour, egg wash and breadcrumbs** for food such as fish, croquettes, cutlets, chicken and vegetable
- **Batter** (A wet mixture of Flour, egg and milk) for food such as Fish, Seafood, Fritters, Onion rings and Fruits)

Principles of Shallow Frying

- Preheat the cooking utensil before adding the food (This seals the food and prevents the absorption of fat by food and reduce the risk of stickling of food)
- The side to be presented for the service is fried first (The best colour and finish occurs on the side fried first)
- Foods which are thick are cooked at lower frying temperature (This allows the food to cook through and colour without burning)
- Different foods to be fried in same pan should be cooked in order of relative cooking time, that is food which will take longer time to cook are placed in the pan first (this allows food to be prepared at time of service)
- Frying pan is moved and turned during cooking (this helps in even distribution of heat and results even browning and cooking of food)
- Tongues are used to move and turn food
- Foods are turned over when moisture appears on surface
- Food should be seasoned before shallow frying
- All fried foods are well drained before service
- Food should never be crowded in frying pan

Principles of Deep Frying

- Food should be of uniform size
- Food should be chilled after crumbing, loose crumbs shaken free and the surface patted
- If coated in butter, any excess should be drained off and the food slowly lowered into the fryer
- Very cold or frozen food, should be added in small pieces and quantities
- Residues of crumbs, batter or food should be skimmed from frying medium
- Frying medium should be at correct temperature before adding food
- The temperature of cooking medium should not exceed the cooking temperature of the food
- Food should be dried before immersing in hot frying medium
- When removing drain the fat over the fryer
- All fried foods should be drained on absorbent kitchen paper before serving
- Food should be seasoned away from the fryer
- Fried food should be served immediately after frying

TEMPERATURE CHART			
Type of Fat/Oil	Approximate		
	Flash Point (°c)	Smoke Point (°c)	Flash Point (°c)
Finest Vegetable Oil	324 °c	220 °c	180 °c
Finest Vegetable Fat	321 °c	220 °c	180 °c
High Class Vegetable Oil	324 °c	204 °c	180 °c
Pure Vegetable Fat	318 °c	215 °c	170 -182 °c
Pure Vegetable Oil	330 °c	220 °c	170 -182 °c
Finest Maize Oil	224 °c	215 °c	180 °c
Finest Fat	321 °c	202 °c	180 °c
Finest Quality Dripping	300 °c	165 °c	170 -182 °c
Finest Olive Oil	270-273 °c	148 -165 °c	175 °c

6.8 Modern Methods of Cooking

Modern methods of cooking are as under:

1. Paper Bag (en papillote)
2. Microwave Cooking

6.8.1 Paper Bag (En Papillote)

A new technology that has had a rapid growth in popularity among the world's top chefs is sous vide (soo veed) cooking. French for "under vacuum," the term is applied to cooking foods that have been vacuum-sealed in plastic bags. In simplest terms, this food preparation technique is a two-step process:

1. Vacuum-pack the food item, plus any seasonings or marinades, in an appropriate plastic bag.

2. Cook the food item, while in the bag, at a constant low temperature, usually in a special water bath.

This method is also known as en papillote; in this method food is tightly sealed in oiled greaseproof paper or foil so that no steam escape during cooking and maximum natural flavour and nutrition is retained in cooked food.

Although the name of the technique refers to the vacuum packing, the heart of sous vide cooking-and the reason many chefs are so excited about it-is the precise temperature control it permits.

As an example, think of roasting a boneless loin of lamb. We could place the meat in an oven at 400°F (200°C) and roast it until the centre reaches a temperature of 140°F (60°C) for medium doneness. As we discussed on pages 69-70, however, the lamb will be medium done only in the centre and more done everywhere else. In addition, we would have to monitor the cooking closely to make sure we remove it from the oven at the right time.

On the other hand, we could vacuum-pack the lamb loin in plastic and place it in a water bath heated to an exact 140°F (60°C). The temperature of the lamb would never go above that temperature, no matter how long we left it in the water bath. And it would be at exactly the same doneness from outside to centre. Because we like a browned exterior on the lamb, we could then remove it from the bag, brown it quickly in a hot sauté pan, and serve it immediately.

6.8.2 Microwave Cooking

Microwave cooking refers to the use of a specific tool rather than to a basic dry-heat or moist-heat cooking method. The microwave oven is used mostly for heating prepared foods and for thawing raw or cooked items. However, it can be used for primary cooking as well. Microwave oven models range in power from about 500 watts up to about 2,000 watts. The higher the wattage, the more intense the energy the oven puts out and the faster it heats foods. Most models have switches that allow you to cook at different power levels.

One of the most important advantages of the microwave oven in à la carte cooking is that it enables you to heat individual portions of many foods to order quickly and evenly. Instead of keeping such foods as stews hot in the steam table, where they gradually become overcooked, you can keep them refrigerated (either in bulk or in individual portions) and reheat each order as needed. This is perhaps the main reason why most restaurants have one or more microwave ovens, even though they may not use them for primary cooking.

Because the microwave oven is a unique tool in food service, the cook should observe the following special points regarding its use:

- Small items will not brown in a standard microwave. Large roasts may brown somewhat from the heat generated in the item itself. Some models have browning elements that use conventional heat.
- Watch timing carefully. Overcooking is the most common error in microwave use. High energy levels cook small items very rapidly.
- Large items should be turned once or twice for even cooking.

- An on/off cycle is often used for large items to allow time for heat to be conducted to the interior.
- If your equipment has a defrost cycle (which switches the oven to lower power), use this cycle rather than full power to thaw frozen foods. Lower power enables the item to thaw more evenly, with less danger of partially cooking it. If your oven does not have this feature, use an on/off cycle.
- Sliced, cooked meats and other items that are likely to dry out in the microwave should be protected either by wrapping them loosely in plastic or wax paper or by covering them with a sauce or gravy.
- Because microwaves act only on water molecules, foods with high water content, such as vegetables, heat faster than denser, drier foods, such as cooked meats.
- Foods at the edge of a dish or plate heat faster than foods in the centre. This is because they are hit by rays bouncing off the walls of the oven as well as by rays directly from the energy source. Therefore:
 - Depress the centre of casseroles so the food is not as thick there as at the edges. This will help it heat more evenly.
 - When you are heating several foods at once on a plate, put the moist, quick-heating items like vegetables in the centre and the denser, slower-heating items at the edges.
 - Because microwaves do not penetrate metal, aluminium foil and other metals shield foods from the radiant energy. For example, a potato wrapped in foil will not cook in a microwave oven.
 - Because microwaves cook so rapidly, they will not break down the connective tissues of less tender meats. Slow, moist cooking is necessary for dissolving these connective tissues.
- The more food placed in a microwave at once, the longer the cooking time. Thus, the primary advantage of microwave cooking-speed-is lost with large roasts and other large quantities.

CHECK YOUR PROGRESS-III

Q.1 Define frying? Explain various types of frying.

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Q.2 Write a short note on microwave cooking?

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6.9 Summary

This unit starts with defining heat and its application in cooking. We have covered the various methods of transfer of heat. The cooking is application of heat to the food and the heat that is applied to food may be moist or dry and depending upon this methods of cooking food is categorised in to many categories like boiling, poaching, steaming, grilling, frying, baking, roasting etc. All the methods of cooking is been discussed in this unit.

6.10 Answer to Check Your Progress

Check your Progress-I

Q.1 Refer section 6.3.2

Q.2 Refer section 6.3.1

Q.3 Refer section 6.3.3

Check your Progress-II

Q.1 Refer section 6.5

Q.2 Refer section 6.6

Check your Progress-III

Q.1 Refer section 6.7

Q.2 Refer section 6.8

6.11 Terminal Questions

Q. Write short note on:

1. Effect of heat on food
2. Methods of transfer of heat
3. Dry heat method of cooking
4. Moist heat method of cooking
5. Frying
6. Paper bag cooking
7. Microwave cooking

UNIT 07: BASIC PREPARATIONS

Structure

- 7.1 Objectives
- 7.2 Introduction
- 7.3 Stock
- 7.4 Sauce
- Check your progress-I
- 7.5. Soup
- Check your progress-II
- 7.6 Marinades
- 7.7 Garnish
- 7.8 Summary
- 7.9 Answer to check your progress
- 7.10 Terminal Questions

7.1 Objectives

After reading this unit learner will be able to:

- Understand meaning ,definition, types and method of preparation of stock
- Understand meaning ,definition, types and method of preparation of sauce
- Understand meaning ,definition, types and method of preparation of soup
- Understand meaning and definition of marinades
- Understand meaning and definition of garnish

7.2 Introduction

The French word for stock is **fond**, meaning "foundation" or "base." In classical cuisine, the ability to prepare good stocks is the most basic of all skills because so much of the work of the entire kitchen depends on them. A good stock is the foundation of soups, sauces, and most braised foods and stews. Nevertheless, the finest cuisine still depends on soups and sauces based on high-quality stocks, so stock-making remains an essential skill you should learn early in your training. Stocks and sauces are almost never served by themselves but are components of many other preparations. You will need to refer to this chapter in connection with many other subjects.

Like stocks, sauces have lost some of the importance they once had in commercial kitchens except, of course, in the best restaurants serving what may be considered luxury cuisine. Some of this decline is due to changes in eating habits and to increased labor costs. No matter where you work, sauce-making techniques are basic skills you will need in all your cooking. Croquettes, soufflés, and mousses have sauces as their base, nearly all braised foods are served with sauces made of their cooking liquids, and basic pan gravies, favourites everywhere, are made with the same techniques as the classic sauces.

The popularity of soups today may be due to increased nutrition consciousness, to a desire for simpler or lighter meals, or to an increased appreciation of how appetizing and satisfying soups can be. Whatever the reasons, they emphasize the importance of soup making skills. A few more techniques are necessary for you to master before you are able to prepare all the types of soups that are popular today. As in sauce-making, basic techniques are the building blocks you can use to create a wide variety of appetizing soups.

Marinades are intended to flavour all manner of fish and meats before cooking. In the olden days they were mostly applied to fish and meat portions to be grilled, especially if a little bland, such as poultry. As today we have increasingly to use more chilled and frozen fish and meats, marinating helps to give back flavour and even colour that has been lost in the defrosting process.

The word garnish is derived from a French word meaning "to adorn" or "to furnish." In English, we use the word to mean "to decorate or embellish a food item by the addition of other items." The word is used also for the decorative items themselves. This definition, at first, seems vague because it could include just about anything.

7.3 Stock

The preparation of stocks has been simplified in many ways since the days of Escoffier, although this does not mean it demands less care or skill. Few chefs today bother to tie vegetables for a stock into a bundle, for example. They're going to be strained out anyway. The number and variety of ingredients is usually not as great as it once was. Nor is it common to cook stocks for as many hours as was once thought necessary. All these details are taken up one by one in this section.

Stock is a liquid containing some of the soluble nutrients and flavours of the food which are extracted by prolonged and gentle simmering (Exception is Fish Stock which only requires 20 Min.). A stock may be defined as, **"a clear, thin-that is, unthickened-liquid flavoured by soluble substances extracted from meat, poultry, and fish, and their bones, and from vegetables and seasonings"**.

TYPES OF STOCK

On the basis of colour and ingredients used for stock making stock can be classified in to following categories:

WHITE STOCK

White Beef Stock
White Mutton Stock
White Veal Stock
White Chicken Stock

BROWN STOCK

Brown Beef Stock
Brown Mutton Stock
Brown Veal Stock
Brown Game Stock

Fish Stock
Veg. Stock

CARE WHILE PREPARING STOCK

- Unsound meat, bones and decaying vegetable will give an unpleasant flavor to stock and stock will deteriorate quickly

- Scum should be removed otherwise it will spoil the colour and flavour of stock
- Fat should be skimmed, otherwise stock will taste greasy
- Stock should always simmer, otherwise water will evaporate and stock will become cloudy
- Salt should never be added to stock

SAFETY AND HYGIENE

- If we wish to store stock, it should be cooled rapidly and stored in refrigerator below **5°C**
- If they are to be deep-frozen then it should be labelled and dated and stored at **-18°C**
- Stock should not be reheated more than once
- Never store stock above eye-level

GENERAL PREPARATION OF STOCK

Ingredients	Quantity
Raw meaty bones	2 Kg.
Water	4.5 Liter
Vegetable	400 Gms.
Bouquet-Garni	One bunch
Peppercorn	12 Nos

METHOD

1. Chop and clean the bones
2. Place in stock pot
3. Add water
4. Cover and bring to boil and reduce the heat
5. Scum should be skimmed
6. Add vegetables and bouquet-garni
7. Simmer for 6-8 Hrs.
8. Skim and strain.

During cooking certain amount of water is evaporated. Add .5Ltr water (cold) this will help to throw scum at surface

GLAZE

Glazes are made by steady boiling white or brown stock and allowing them to reduce to a sticky or gelatinous consistency.

1. They are stored in jars and when cold kept in refrigerator.
2. The peeping quality of glazes are higher the stock, it can be kept for months.
3. Glazes are used to improve the flavor of prepared food.
4. They may be used as base for sauces

7.4 Sauce

Sauce works like a seasoning. It enhances and accents the flavour of the food; it should not dominate or hide the food. A good cook knows that sauces are as valuable as salt and pepper. A simple grilled steak is made even better when it has an added touch, something as simple as a slice of seasoned butter melting

on it or as refined as a spoonful of béarnaise sauce. No matter where you work, sauce-making techniques are basic skills you will need in all your cooking. Croquettes, soufflés, and mousses have sauces as their base, nearly all braised foods are served with sauces made of their cooking liquids, and basic pan gravies, favourites everywhere, are made with the same techniques as the classic sauces. Sauce is defined as under:

“Sauce is a liquid, having smooth and glossy appearance, definite in taste and light in texture; thickening is done in moderation”.

USES OF SAUCES

1. To enhance the flavour of the food
2. To give colour to food
3. Help in digestion
4. Moisten dry food
5. Enhance nutritional value of food
6. Lend a name to dish e.g. fish Portuguese
7. Give a balanced taste

THICKENING AGENTS FOR SAUCES

Thickening agents used for SAUCES are as under:

1. Roux
2. Beurre-manie
3. Starch
4. Egg yolk
5. Puree
6. Blood
7. Glazes

ROUX: A roux is a combination of Fat and Flour which are cooked together. Roux is of type:

1. White roux
2. Blond roux
3. Brown roux

BEURRE- MAINE: Equal quantity of Butter or Margarine and Flour kneaded to a smooth paste and added to boiling liquid.

STARCH: Starch such as corn flour, arrowroot, potato starch etc. are used to thicken sauce or gravy.

EGG YOLK: Egg yolk is used in emulsified sauces such as mayonnaise, hollandaise and custard sauces.

PUREE: Vegetable or fruit puree is known as CULLIS used in thickening.

BLOOD: Blood is used in recipes such as jugged hare

GLAZES: Stock reduced base sauces are prepared using demi-glaze

CLASSIFICATION OF SAUCES

Sauces are classified as shown in the chart below:

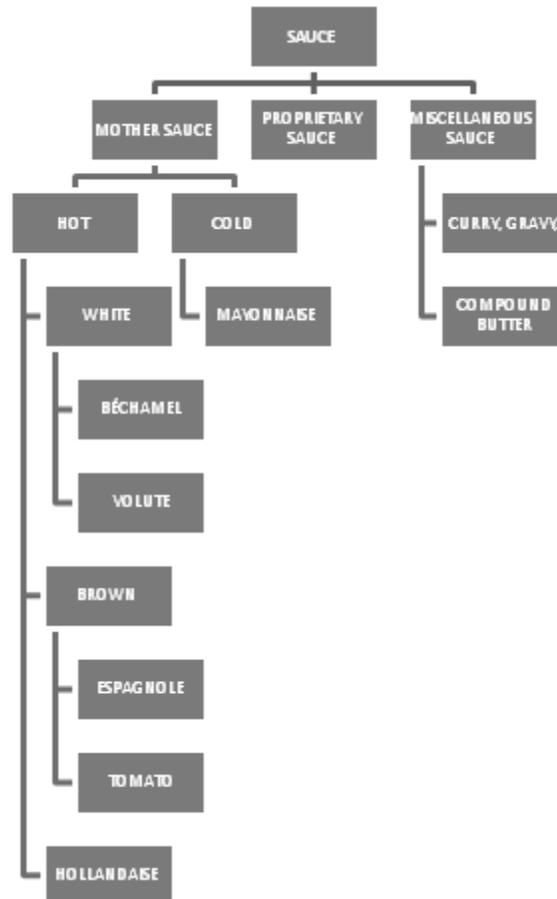


Figure7.1 Classification of sauces

BASIC MOTHER SAUCES

Basic mother sauces are:

1. BÉCHAMEL
2. VELOUTÉ
3. ESPAGNOLE
4. TOMATO
5. HOLLANDAISE
6. MAYONNAISE

BÉCHAMEL SAUCE

A white sauce prepared by adding milk to roux. This sauce is widely used for egg, vegetables and gratin dishes. It can be kept warm in bain-marie and used to prepare other derivatives

Ingredients	Quantity
Margarine / oil / Butter	100Gms.
Flour	100Gms
Milk	1000 ML.
Studded onion	1 Nos

METHOD

1. Melt fat in thick bottom pan.
2. Add flour and mix well.
3. Cook for few minutes over a gentle heat with out coloring.
4. Remove from heat and cool the roux.
5. Gradually add the warm milk and stir till smooth.
6. Add onion studded with clove and allow simmering for 30 Min. remove from heat and take out onion and strain.
7. Cover with thin film of butter to prevent skin formation.

DERIVATIVES OF BÉCHAMEL

Sauce	Name of Ingredients	Served With
Mornay	Béchamel + Parmesan + Egg yolk	Fish, Eggs & Vegetables
Cream	Béchamel + Fresh cream + Butter	Poached Fish, Boiled Vegetable
Soubise	Béchamel, Sautéed Onion, Pepper + Nutmeg and strained	Eggs, Fish, Roast Meat
Scotch egg	Béchamel + 2 Hard Boiled egg, diced	Poached/Boiled Fish
Parsley	Béchamel + Fresh Cream + Chopped Parsley	Poached/Boiled Fish, Veg
Anchovy	Béchamel + Anchovy Essence	Poach/Boil/Fry Fish
Onion	Béchamel + minced Onion cooked in milk	Roast Mutton
Mustard	Béchamel + French/English Mustard	Grilled Herrings

SAUCE VELOUTÉ

A sauce prepared from white stock and blond roux. It can be kept warm in bain-marie and used to prepare other derivatives.

Ingredients	Quantity
Margarine / oil / Butter	100Gms.
Flour	100Gms
Stock	1000 ML.

METHOD

1. Melt fat in thick bottom pan.
2. Add flour and mix well.
3. Cook to a sandy texture over a gentle heat with out coloring.
4. Remove from heat and cool the roux.
5. Gradually add the boiling stock and stir till smooth.
6. Allow to simmer for approximately 1Hrs.
7. Remove from heat and strain

DERIVATIVES OF VELOUTÉ**CHICKEN VELOUTÉ**

SAUCE	NAME OF INGREDIENTS	SERVED WITH
Supreme	Chicken Velouté + White wine + Parsley + Shallots + Mushroom trimmings & strain add Fresh Cream + Egg yolk +Lemon juice	Fish Chicken
Allemande	Chicken Velouté + Egg yolk + Mushroom trimmings + Cream + Lemon juice	Poached Chicken
Ivory	Chicken Velouté + White wine + Parsley + Shallots + Mushroom trimmings & strain add Fresh Cream + Egg yolk +Lemon juice + Meat Glaze	Poached/Boiled Chicken
Mushroom	Chicken Velouté + White wine + Parsley + Shallots + Mushroom trimmings & strain add Fresh Cream + Egg yolk +Lemon juice + sliced Button Mushroom	Chicken & Mutton
Chaufroid	Chicken Velouté + Chicken glaze Cream	+ Cold dishes
Chivry	Chicken Velouté + Tarragon +Parsley +Chives then strain + Green Butter	Boiled/Poached Poultry

MEAT/FISH VELOUTE

SAUCE	NAME OF INGREDIENTS	SERVED WITH
Shrimp	Fish velouté + fish fumet + cream + shelled shrimp tails + shrimp butter	Fish Shrimp
Normande	Fish velouté + mushrooms + oyster liquor +fish fumet finished with egg yolk cream + shelled shrimp tails + shrimp butter	Fish & Shell Fish
Diplomat	Fish velouté + mushrooms + oyster liquor +fish fumet finished with egg yolk cream + shelled shrimp tails + shrimp butter sauce + Lobster butter garnished with dices of lobster and truffles	Fish Shellfish
Caper	Mutton velouté + caper	Boiled leg of Mutton

Bercy	Allemande Sauce + chopped shallots +white wine + meat glaze + butter garnished with dices of marrow & chopped parsley	Grilled meat
Nantua	Fish velouté + fried mirepoix fish in crayfish butter	Fish Shellfish

ESPAGNOLE SAUCE

A sauces made by adding brown stock to brown roux and mirepoix and tomato puree.

Ingredients	Quantity
Margarine / oil / Butter	50 Gms.
Flour	60 Gms.
Brown Stock	1000 ML.
Tomatos puree	25 Gms.
Carrot	100 Gms.
Onion	100 Gms.
Celery	50 Gms.

METHOD

1. Met fat in thick bottom pan.
2. Add flour and mix well to a light brown colour, stirring frequently.
3. Cool and mix the tomato puree. Gradually add the boiling stock and bring to boil.
4. Wash, peel and roughly cut the vegetables and brown lightly, drain extra fat and add to sauce.
5. Simmer for 4-6 Hrs. and Skim when necessary.

DERIVATIVES OF ESPAGNOLE

Sauce	Name of Ingredients	Served With
Bercy	Demi glaze + meat glaze + Minced shallots + white wine + sliced bone marrow	Grilled Meat Fish
Chasseur	Demi glaze + minced mushroom + sautéed chopped shallots & Parsley + reduced white wine	Grilled/Sautéed Meat, Poultry and Egg
Robert	Demi glaze + chopped onion + vinegar + sugar + mustard	Grilled Meat
Charcutiere	Demi glaze + chopped onion + vinegar + sugar + mustard+ juliennes of Gherkin	Grilled Pork chops
Madeira	Demi glaze + Madeira wine	Small items of Meat, Fish and Poultry

TOMATO SAUCE

A sauce made by cooking tomatoes with bacon, carrots, chopped onion and garlic in stock and passed through sieve.

Ingredients	Quantity
Margarine / oil / Butter	10 Gms.
Flour	10 Gms.
Stock	375 Ml.
Tomatos puree	50 Gms.
Carrot	50 Gms.
Onion	50Gms.
Celery	25 Gms
Bacon strips	10 Gms.
Bay leaf, Thyme, clove, garlic, salt & Pepper	

METHOD

1. Met fat in thick bottom pan.
2. Add the herbs and mirepoix and Bacon scrap brown lightly.
3. Mix the flour and cook to sandy texture and colour slightly.
4. Mix tomato puree and allow cooling.
5. Gradually add boiling stock.
6. Stir and add garlic, seasoning and simmer for 1 Hrs.
7. Correct the seasoning and cool. Pass through strainer.

DERIVATIVES OF TOMATO

Sauce	Name of Ingredients	Served With
Bretonne	Tomato sauce + sautéed chopped onions +White wine reduce & strained add Butter and chopped Parsley	Haricots
Portugaise	Tomato sauce + White wine + garlic + concussed tomato	Egg, Fish, Shell Fish
Italienne	Tomato sauce + demi-glaze + chopped shallots, Mushroom, Lean Ham & fine herbs	Brains, Lamb, Cutlets
Barbecue	Tomato sauce + ketchup + vinegar + Sugar	Barbecued Meat, Fish and Poultry
Tomato-Chaufroid	Tomato sauce + aspic jelly	Cold chicken and Eggs
Provencale	Thin Tomato sauce + sauteed sliced mushroom + chopped Parsley, Garlic, Tomato Concasse + Sugar	With cold Meat, Fish and Poultry

HOLLANDAISE SAUCE

A hot emulsified sauce made from egg yolk and clarified butter.

Ingredients	Quantity
Butter	200 Gms.
Egg yolk	200 Gms.
Crushed Pepper Corn	2 Nos.
Vinegar	15 Ml.
Lemon juice	½

METHOD

1. Melt butter in a pan.
2. Place crushed peeper corn and Vinegar and reduce.
3. Add little water to cool.
4. Add egg yolk and whisk.
5. Place the pan in a double boiler and whisk the egg yolk till it gets cooked.
6. Gradually add the melted butter until it blends and forma a thick sauce.
7. Add lemon juice.
8. Strain and correct the seasonings.

DERIVATIVES OF HOLLANDAISE

Sauce	Name of Ingredients	Served With
Maltaise	Hollandaise + Zest + Orange juice	Hot Asparagus
Mousseline	Hollandaise + stiffly whipped Cream	Fish, Egg, Vegetable & Meat
Noisette	Hollandaise + nut brown cooked butter	Poached Salmon, Trout
Béarnaise	Hollandaise + chopped Tarragon & Chervil	Grilled Meat and Fish
Choron	Hollandaise + chopped Tarragon & Chervil + Tomato puree	Grilled & Sautéed Meat
Foyot	Hollandaise + chopped Tarragon & Chervil + meat glaze	Grilled & Sautéed Meat
Mustard	Hollandaise + mustard	Meat and Steak

SAUCE MAYONNAISE

A cold emulsified sauce consisting of egg yolks and oil blended together and flavoured with vinegar, salt, pepper and mustard.

Ingredients	Quantity
Salad oil	1000 Ml.
Egg yolk	8 Eggs
Mustard	¼ table spoon
Vinegar	25 Ml.
Lemon	1 Nos.

Seasonings to taste

Q.2 What are the thickening agents? Explain

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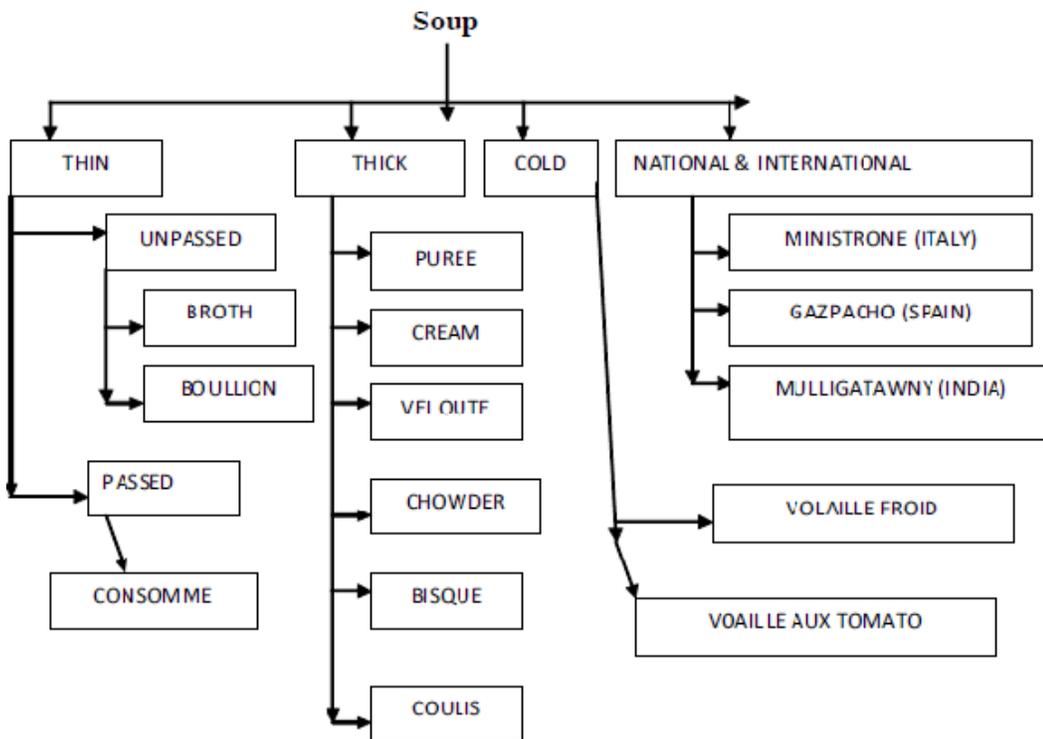
7.5 Soup

Soup, according to the dictionary, is a liquid food derived from meat, poultry, fish, or vegetables. This definition is all right as far as it goes, but there's a lot it doesn't tell us. Is a stock, straight from the stockpot, a soup? Is beef stew liquid enough to be called a soup? We're interested more in production techniques than in definitions. However, a few more definitions are necessary before we can go into the kitchen, so we can talk to each other in the same language. Definitions aren't rules, so don't be alarmed if you hear other books or chefs use these terms differently. What matters is that you learn the techniques and are able to adapt them to many uses. **"Soup is a liquid food prepared by extracting nutrients from solid food like Meat, Beef, Poultry, and Game etc in a liquid medium".**

- Soups are regarded as appetizers.
- Soups are served as first course of meal.

Soups are classified as under:

1. Thin
2. Thick
3. Cold
4. National & International



1. THIN SOUP: Thin soups are clear, flavoured, nutritious liquid prepared without any thickening agent, garnished with small cuts of food items floating in it. Thin soups are further classified, whether they are passed through strainer or not. Depending on these criteria they are of following two types:

- Passed
- Un passed

PASSED: They are passed through the strainer. E.g. Consommé

Consomme: Consommé is a clear soup prepared from Meat, Beef, Poultry or Game stock, garnished with variety of ingredients; Name of consommé depends upon the garnish. E.g. consommé julienne

- Consommé should be sparkling, clean and well flavoured.
- Consommé may be served hot or cold.

Ingredients	Quantity
Minced Meat	225 Grams
Onion	70 Grams
Carrot	50 Grams
Turnip	30 Grams
Stock	1500
Egg white	2 Nos.
Celery	40 Grams
Thyme	¼ TSP
Bay leaf	½ Nos.
Pepper corn	3 Nos.

Method:

1. Mix minced meat with chopped Onion, Carrot, Turnip, Celery and mix well with egg white.
2. Add cold stock and Thyme, Bay leaf and Pepper corn in it.
3. Place on fire and keep stirring to keep food particle suspended.
4. Bring it to boil and simmer for 1½ Hrs.
5. Strain through double muslin cloth.

Examples

Consomme Alexandra: Chicken consommé thickened with Tapioca and garnished with Juliennes of Chicken, Quenelles and shredded lettuce.

Consomme Andalouse: Consommé blended with Tomato puree and garnished with dices of Royale and dices of tomato, juliennes of ham, boiled rice and vermicelli and threaded eggs.

Consomme Bretonne: Consommé garnished with juliennes of Leek, Celery, Onion and Mushroom with shredded Lettuce.

Consomme Colbert: Consommé garnished with Printaniere of vegetables and small poached eggs.

SOME CONSOMME GARNISHES

BRETON	: Juliennes of Celery, Onion and Leeks
BRUNNOISE	: Small Diced vegetables
DUBARRY	: Flowerettes of cauliflower
FLORENTINE	: Fine strips of blanched Spinach
JULIENNES	: Julienne cuts of vegetables
PAYSANNE	: Fresh vegetables cut in uniform size
ST. GERMAIN	: Fresh green Peas
ROYAL	: Dices of savory egg custard
VERMICELLI	: Fine Noodles
PRINTANIERE	: Small dices of mixed fresh vegetables

UN PASSED SOUPS

Thin soups which are not passed through sieve after preparation and served with solids are known as un passed soups. Un passed soups are of following two types:

1. Broth
2. Bouillon

Broth: Broth is prepared by cooking good quality of stock along with diced Meat, Vegetables and Rice or Barley; and served with solids. Thickening agents such as Rice or Barley or Macaroni etc. are put at the beginning of preparation.

Bouillon: Bouillons are strong Meaty flavoured, clear soup with pieces of vegetables, Meat, Seafood etc. floating in the soup. It is a clear soup served un passed.

2. THICK SOUPS

These are passed thick soup; thickening is done by using some thickening agent such as Starch, Puree etc. they are of following six types:

1. Puree
2. Cream
3. Velouté
4. Chowder
5. Bisque
6. Coulis

Puree: Soups thicken by its main ingredients (E.g. Leguminous plants, Potato or Cereals) and passed through sieve. Consistency of such soups should resembles to cream. These soups are served with Croûtons. E.g. Puree de lentils, Puree de haricot blanche, Puree Parmount, Puree de tomato, Puree de pois faris

Cream: A Soup of creamy consistency which is made with generally puree of vegetables mixed with béchamel or white sauce. It can be finished with cream if required. E.g. Crème de celeri, crème de tomato, crème de champignon

Veloute: A thick soup made from white stock & roux finished with liaison (mixture for thicker) of egg yolk & cream. E.g. Veloute Indinne, Veloute princesse, Veloute celeries

Chowder: A thick soup of American origin prepared from Potatoes, Onion, pieces of bacon, seasonings and seafood. Crackers are added just before service. E.g. Praum chowder, Vegetable Chowder, Oyester Chowder, Pork Chowder etc.

Bisques: These are thickened fish soups generally made from shellfish puree and thickened with rice or cream. Diced fish is served in it. E.g. Crayfish Bisque, Lobster bisque etc.

Coulies: A thick soup prepared from puree of shellfish. Eg. Coulis decrevisses, Coutes de crabes.

3. COLD SOUPS

Cold soups are thickened by natural gelatin present in ingredients or by adding starch or puree. They are served cold. Eg. Vichyssoise, Velaille Napolitaine, Veloute de velaille froid, Gelee de velaill aux tomato

4. INTERNATIONAL SOUPS

There are varieties of cold / hot, thick / thin soups placed in this special category, because of their origin. There are some soups originated in a certain locality and are associated with a particular place. Most of these are un-passed one.

Eg.	Soup	Country
	Minestrone	Italy
	Green Turtle Soup	England
	French Onion Soup	France
	Scotch Broth	Scotland
	Mulligatawny	India
	Gazpacho	Spain
	Manhattan Calm Chowder	America
	Camaro	Brazil
	Paprika	Hungary

Care While Preparing Soup

1. Use good quality strong flavoured stock.
2. Garnish should be small so that it can be picked up by soup spoon.
3. Soup should be moderately seasoned.
4. One liter of soup yields five portions.
5. Accompaniments should be crisped

Common Garnish for Soup

Croutons	- Dices or fancy cut bread / toast fried to golden brown color
Cereals	- Rice or barley
Cream	- Unsweetened whisked cream or sour cream
Meat	- Usually small dices or juliennes
Poultry	- Usually small dices or juliennes
Cheese	- Cheese balls, grated parmesan cheese
Seafood	- Diced or flakes of seafood
Pasta	- Noodles or Spaghetti
Vegetables	- Different cuts of vegetables like carrot, turnip etc.

CHECK YOUR PROGRESS-II

Q.1 Define Soup?

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Q.2 What are the various types of soup?

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7.6 Marinades

Marinades are intended to flavour all manner of fish and meats before cooking. In the olden days they were mostly applied to fish and meat portions to be grilled, especially if a little bland, such as poultry. As today we have increasingly to use more chilled and frozen fish and meats, marinating helps to give back flavour and even colour that has been lost in the defrosting process.

Marinade for fish and shellfish

Ingredients: 500 ml white wine, 250 ml oil, Juice of 2 lemons, Salt and milled pepper and Parsley stalks

Method: Mix all ingredients well, brush on fish portions and prawns etc. an hour or so before cooking Ideal whether fish is to be grilled, fried or deep fried. Prawns will much improve even for cocktails

Marinade for poultry (especially chicken and veal)

Ingredients: 500 ml white wine, 250 ml oil, Juice of 1 lemon, 2-3 tbsp honey, Salt, milled pepper, cayenne, paprika powder

Method: Mix all ingredients well, brush on fish portions and prawns etc. an hour or so before cooking

Marinade for red meats and game

Ingredients: 500 ml oil, 1 glass of port, 2-3 crushed cloves garlic, Salt, milled pepper and cayenne

Method: Mix all ingredients well, brush on fish portions and prawns etc. an hour or so before cooking

Brine for pickled/brined salmon (Gravad Lax)

Ingredients (for both sides of a 3 kg salmon): 200 g sea salt, 150 g caster sugar, 30 g black peppercorns, coarsely crushed, 2-3 bunches of dill stalks only (keep most dill itself for sauce)

Method: Pick best dill off stalks and set aside. Crush dill stalks with bat (most flavour inside) Mix salt, pepper and sugar well, rub into the flesh sides of the salmon, place on top of one another into a stainless steel tray with the crushed dill stalks in between, store in fridge. Marinate for 48-72 hours, turning the sides several times. Serve cut in thin slices garnished with sprigs of dill and with mustard sauce.

7.7 Garnish

To many people, the word garnish means a sprig of parsley haphazardly placed on the plate. Just as common is the practice in some restaurants of adopting a single garnish and using it routinely on every plate, from prime rib to batter-fried shrimp. No one garnish is appropriate for every plate, just as no one side dish is appropriate for every plate. In fact, the term garnish has been used for a great variety of preparations and techniques in the history of classical and modern cuisines. Today, the use of parsley sprigs on every plate has become rare, and we are again using the word garnish in a more traditional way.

Classical Garnish

In classical cooking, the terms garnish and garniture have been used the way we use the term accompaniments. In other words, garnishes are any items placed on the platter or plate or in the soup bowl in addition to the main item. It happens that these accompaniments also make the food look more attractive, but that is not the emphasis.

The classical French chef had a tremendous repertoire of simple and elaborate garnishes, and they all had specific names. A trained chef, or a well-informed diner, for that matter, knew the word Rachel on the menu meant the dish was served with artichoke bottoms filled with poached marrow, and Portugaise meant a garnish of stuffed tomatoes.

There were so many of these names, however, that no one could remember them all. So they were catalogued in handbooks to be used by chefs. Le Répertoire de la Cuisine, first published in 1914 and one of these handbooks has 209 listings in the garnish section alone, not to mention nearly 7,000 other preparations, all with their own names. The garnishes may be as simple as the one called Concorde or as complex as the one called Tortue, quoted here to give you an idea of the complexity and elaborateness of classical garnish.

Concorde (for large joints)-Peas, glazed carrots, mashed potatoes.

Tortue (for Entrées)-Quenelles, mushroom heads, gherkins, garlic, collops of tongue and calves' brains, small fried eggs, heart-shaped croutons, crayfish, slices of truffles, Tortue sauce.

Many of the classical names for garnishes are still used in modern kitchens, although they have lost the precise meanings they once had. You will encounter some of these terms in your career, so it is worthwhile learning them. Remember that the following definitions are not the classical ones but simply the garnish or accompaniment generally indicated by the terms in today's kitchens.

Bouquetière : bouquet of vegetables
Printanière : spring vegetables
Jardinière : garden vegetables
Primeurs : first spring vegetables

Some of the common terms used in garnish and its meaning are as under:

Clamart : peas
Crécy : carrots
Doria : cucumbers (cooked in butter)
Dubarry : cauliflower
Fermière : carrots, turnips, onions, and celery, cut into uniform slices
Florentine : spinach
Forestière : mushrooms
Judic : braised lettuce
Lyonnaise : onions
Niçoise : tomatoes concassé cooked with garlic
Parmentier : potatoes
Princesse : asparagus
Provençale : tomatoes with garlic, parsley, and, sometimes, mushrooms and/or olives
Vichy : carrots (especially Carrots Vichy)

Hot Platter Garnish

In classical cuisine, food was nearly always brought to the dining room on large platters and then served, rather than being plated in the kitchen, as is most often done today. Platter garnish need not be elaborate or difficult to prepare. A simple assortment of colourful vegetables, carefully cut and properly cooked to retain colour and texture, is appropriate to the most elegant presentation. Stuffed vegetables, such as tomato halves filled with peas, are a little fancier, but still easy to prepare. Borders of duchesse potatoes are also popular. Following are a few more guidelines that apply to hot platter presentation and garnish.

1. Vegetables should be in easily served units: In other words, don't heap green peas or mashed potatoes on one corner of the platter. More suitable are vegetables such as cauliflower, broccoli, boiled tomatoes, asparagus spears, whole green beans, mushroom caps, or anything that comes in large or easy-to-handle pieces. Small vegetables such as peas can be easily served if they are used to fill artichoke bottoms, tomato halves, or tartlet shells.
2. Have the correct number of portions of each item: Vegetables like Brussels sprouts and tournéed carrots are easily portioned in the dining room if they are arranged in little portionsize piles.
3. Arrange the garnishes around the platter to get the best effect from the different colors and shapes: The meat, poultry, or fish is usually placed in

- the centre of the platter, or in a row or rows, and the garnishes arranged around it.
4. Avoid being too elaborate: While it is sometimes desirable to make ornate platters, simplicity is usually preferable to an overworked appearance. Let the attractiveness of the food speak for itself. The garnish should never dominate or hide the meat, which is the center of attention.
 5. Serve extra sauce or gravy in a sauceboat: If it is appropriate, dress or nap the meat or fish items with some of the sauce, but don't drown the entire platter with it.
 6. Serve hot foods hot, on a hot platter: Don't spend so much time arranging the food that it's cold by the time it reaches the dining room.

7.8 Summary

In this unit we have learnt about basics of food production. The unit begins with stock-the foundation, for various sauce, soup and gravies. Then we have discussed about the mother or basic six sauces and their derivatives. Then the unit discusses the marinades and garnishes.

7.9 Answer to Check Your Progress

Check your progress-I

Q.1 Refer to section 7.3

Q.2 Refer to section 7.4

Check your progress-II

Q.1 Refer section 7.5

Q.2 Refer section 7.5

7.10 Terminal Questions

Q. Write short notes on:

- Stock and its types
- Mother Sauce
- Types of Soup
- Marinades
- Garnish

UNIT 8: INTRODUCTION TO FOOD & BEVERAGE SERVICE INDUSTRY

Structure

- 8.1 Introduction
- 8.2 Objectives
- 8.3 Food & Beverage Service Industry
- 8.4 Characteristics of Food & Beverage Service Industry
- 8.5 Trends in Food & Beverage Service Industry
- 8.6 History of Food & Beverage Service Industry
- 8.7 History of food & Beverage service Industry in India.
- 8.8 Major establishments in Food & Beverage Service Industry.
- 8.9 Summary
- 8.10 Glossary
- 8.11 Check your Progress-1 Answer
- 8.12 Check your Progress-2 Answer
- 8.13 Further Reference/Bibliography
- 8.14 Suggestive Reading
- 8.15 Terminal Questions

8.1 Introduction

The Provision of food & beverage away from home forms a substantial part of the activities of the hotel and catering industry. People need accommodation with food and beverages if they are away for more than a day and only food & beverage if they are away for a short duration.

Food & beverage service has developed into a huge industry. The number and type of eating out establishments has increased tremendously as suppliers constantly try to satisfy the changing demands and tastes of the market. In this first unit we are going to learn about the introduction of food and beverage industry.

8.2 Objectives

After studying this unit, the student must know.

- Understand the origin and growth of Food & Beverage Industry.
- Trace the development of food & Beverage service Industry.
- Identify the reasons for its phenomenal growth.
- Learn about the people who contributed to the development and expansion of food & beverage service Industry.

8.3 Food & Beverage Service Industry

Food & beverage industry is usually defined by its output of products, to satisfy, the various demands of food & drinks of people. But it doesn't include the manufacturing of food & drink and its relating. In today's world, the food &

beverage service industry has expanded a lot and now- a-days as per calculation it is serving more than 100 million meals per day. It has spread across all walks of life. Hotel, restaurants, industrial canteen, hospital canteen, railways, airways, all is now part of food & beverage service industry.

Food of Beverage service is an operation in which product/service are created and delivered to the customer almost simultaneously. "To be of service literally means to attend to someone's needs. It involves helping, giving, sharing and meeting needs. Services and manufactured products have different characteristics.

Manufactured product	Service
Tangible, produced, shipped purchased now for consumption later, lacking interaction between manufacturer and consumer.	Intangible simultaneously produced and consumed.

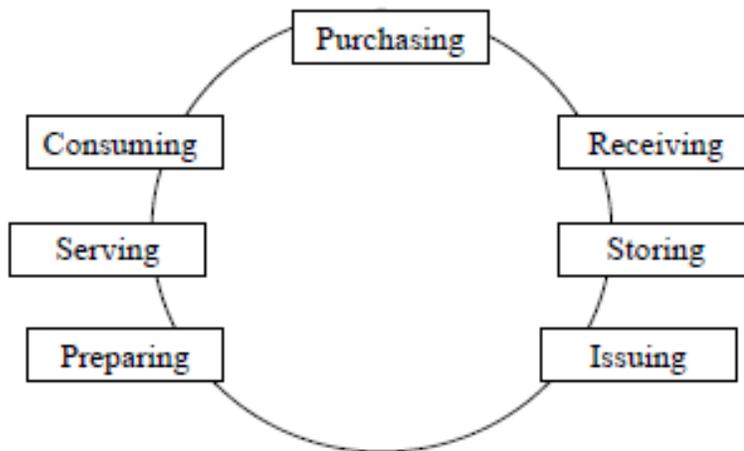
Nature of service:

- 1) Services are partly or wholly intangible.
- 2) Services are consumed at the moment or during the period of production or delivery.
- 3) Services usually requires interaction between the service provider and the customer/client/Guest.

Food & Beverage Service Industry is defined by three words.

Competence	Friendliness	Ubiquitous
Serving Food & Beverage in the correct manner to the guest competence alone does not make a good service person.	The service person should make the guests in a private room.	It means found everywhere at the same time. A ubiquitous manager will appear to have eyes in the back of his or her head. The Service persons know what you want without having to request it.

Most food & beverage businesses operate with in the cycle & the different stages of the cycle present both challenges & opportunities for operators. The food & beverage service industry engages itself in the provision of food and beverages, mainly to the people who are away from their homes for different reasons. Such people need accommodation with food & beverages if they are away for more than day and only food & beverages if they are away for a short duration of time. The basic needs of customers for food & beverages are met by the food & beverage service industry, which has been associated with loading ever since people started travelling. People who move out of their houses for various reasons, such as job, education, business, leisure, medical treatment, sports, religion and so on, depend completely on the food & beverage service industry for their meals.



Most food of beverage operations aims to provide:-

- Quality food of beverages
- A clean, hygienic & safe environment
- Comfortable & well designed facilities
- Professional, attentive and friendly service
- Value for money

8.4 Characteristics of the Food & Beverage Service Industry

The following are the main characteristics:-

- A vital part of everyday life.
- Major contributor to the national economy.
- Highly fragmented & complex
- Creates employment
- Encourages entrepreneurship
- Promotes diversity through many different food concept and cuisines
- Local multiplier using many other peripheral services
- Consumer led
- Competitive
- An opportunities to enjoy the company of friends, family & colleagues
- Fulfils, basic needs -food is a basic need for everyday life.

8.5 Trends in Food & Beverages Service Industry

Following are some key trends:-

- Guests become more sophisticated.
- More emphasis on food safety & sanitation.
- Increase in restaurants.
- More casual/less formal & theme restaurants.
- Growth in chains-all cuisines.

- Increase in convenience food.
- Increase in coffee chains-coffee culture.
- Increase takes out meals & home meal replacement.
- Out sourcing outlets in hotels-co-branding.
- More focus on healthier eating.
- Increase in organic food consumption.

8.6 History Food & Beverage Service Industry

The hotel industry originated in the 6th Century BC and is perhaps one of the oldest endeavours. The earliest inns were just large halls where travellers slept on the floor along with the animals on which they travelled. These conditions prevailed for hundred of years until the mode of travel changed.

The invention of the wheel, one of the greatest events in the history of civilization resulted in the production of quicker modes of conveyance. The speed of travel increased with the development of vehicles. With the advent of the Industrial revolution in England, travel for business gradually started increasing. A growing economy also led to an increase in travel for recreation and meaningful utilization of leisure. This created a yearning among people to travel beyond the traditional boundaries. Travellers of earlier times belonged to different segments of society. They consisted of members of the nobility as well as religious messengers, missionaries, traders and soldiers. Travel for the common man came at a much later date. The aristocrats or nobility travelled on horseback or in carriages, and were usually entertained by people of their own class in castles and mansions of great estates. They were accommodated and fed, befitting their status, with sumptuous meals and gallons of wine. Monasteries provided shelter to the religious order, while the soldiers were lodged in forts or in tents. It was the traders who helped in promoting the establishment of inns. They had no other alternative but to stay in inns for a night or two while travelling.

The improvement of roads and the building of carriages also increased the number of people on the move. To provide accommodation and food for this increasing number of travellers, many types of inns were set up along the frequently travelled roads and pathways. Thus, inn-keeping began its steady growth and became more popular as time progresses. In earlier times, working in an inn was skill-oriented, and these inns were normally run by a husband and wife team. Inns provided shelter and stabling facilities. Some of them also provided wholesome food & wine.

“A hotel is defined as a place where a bonafide traveller can receive food and shelter, provided he is in a position to pay for it, and is in a fit condition to be received.”

The lead in a hoteliering was taken by several nations of Europe, especially France and Switzerland. **Chalets**-small cottages with an overhanging roof found in the Swiss Mountains and small hotels, which provided a variety of services, were mainly patronized by the aristocracy of the day.

The food & beverage service industry has its roots in the inns and taverns of the colonial period. Inns in America were patterned after those in England. Samuel Cole of Boston opened the first American tavern, the Coles ordinary, in Boston in 1634. Taverns and Inns became informal gathering places where patrons could discuss politics and community gossip over ale and food. In 1740, the first stage coaches began travelling from Boston and made roadside inns even more accessible and popular. The American Revolution ended the reign of the roadside inns as they went out of fashion along with the British. French cuisine became popular in government and society circles, with even presidents Washington and Jefferson serving French dishes to their guests.

Around 1760, a type of establishment that became common in Paris, called Hotel Garni came into vogue. It was a large house with a number of rooms or apartments available for rent by the day, week or month. Its advent signified a more luxurious and organized way of providing lodging quite different from the basic requirements met by the inns of that period. In France the first restaurant where customer could choose from a selection of items presented on a menu was opened in 1765 by **A. Boulanges**. The City Hotel in New York was the first building meant solely for use as a hotel. It was built in the year 1794. In the 1820s the first American restaurant opened in New York with these establishment began the era of 'fashionable' restaurants where dining was a social event and an indulgence in fine food surrounded by lush decor, some featuring nightingales and elaborate fountains. In the year 1827, the Delmonico brothers, who were immigrants from Switzerland, opened a pastry shop and café in New York City.

It proved to be a change for the better from the eateries of that era, and led to the opening of their first restaurant a few years later. Thus, the art of food service became recognized as an important part of the dining experience. The big boom in the hotel industry came in the 1920s, when the concept of chain hotels was born, under the stewardship of **Ellsworth Milton Statler**. He was the hotel man of the century. He has given statements like "**Life is Service**" and "**Guest is always right**". However, during the Great Depression of the 1930s, there was a considerable decrease in business thereby affecting the growth of the hotel industry. Immediately after the second world war, the hotel industry regained its prominence and registered a steady growth. In 1950s, Motels and International hotel chains gave a big boost to the industry. These chains either bought up smaller individually owned properties, or built their own hotels. Many individual hotel operators merged with these international hotel chains, as it increased their ability to cope with the growing competition. As far as specialized dining was concerned, it was **Cesar Ritz** and **Auguste Escoffier**, who popularized public dining in Europe. Gradually dining out became fashionable. The pioneers in this field set very exacting standards, with superb cuisine and impeccable and stylish service of food and wine. By the turn of the century, they had taken London by storm and given Londoners a new fad a gracious dining experience with the increase of affluence among many segments of society, public dining gained greater acceptance and led to expansion and changes in the food and beverage services to suit varied tastes.

8.7 History of Food & Beverage Service Industry in India

The food and beverage service industry in India traces its roots to the traditional community feasts and the movement of people on Pilgrimage thousands of years ago. Most people were on the move primarily for preaching religion and hunting. People took shelter under trees when they were away from their homes and depended on natural sources for their food. Their lives were endangered by wild animals and wayside robbers, which forced them to look for a place that assured them safety, accommodation and food. **Dharamshalas** and **Chatrams** came up to protect the lives of travellers from wild animals and robbers. These were buildings where travellers could stay free of cost. The travellers were also provided stables and sheds for horses and bullock carts, respectively, free of charge. They were given food and accommodation at no cost during the rule of kings. Kings entertained common people and merchants with feasts consisting of a variety of rich dishes, traditional dances, bravery arts, etc, during festivals.

The outsiders who came to India during the course of its history include the Greeks under Alexander the great, the Kushanas from Central Asia, the Mongols under Genghis Khan, Muslim traders and invaders from the Middle East and Central Asia, and finally the British and other Europeans.

It was during the Mughal rule that Sarais were developed to provide accommodation to travellers which were later converted to inns and western style hotels during the British rule. The invasion by other dynasties brought in their cultures and cuisines to the land.

Europeans visited the country to trade for the finest cotton textiles as well as spices. Eventually the British colonized the region. They introduced their cuisines, the skills of making wines and distilled drinks and eating habits. Table etiquettes and the art of eating with continue to eat with. However, even today, people continue to eat with their fingers. In Tamil Nadu, people eat their meals from banana leaves and in the north, from a thali. Economic activities Paved the way for development of western-style hotels and restaurants, mainly to cater to the requirements of the British & European traders. The development of catering in India is mainly attributed to the British, who introduced hotels and restaurants similar to the ones in Europe. The rapid development of transportation, especially the railways in the mid-nineteenth century, enabled people to move in large numbers. This led to the establishment of small lodges and restaurants in and around railway stations to cater to the needs of the travellers. Refreshment rooms at railway stations and Pantry cars in some of the trains were introduced. Reputed hotels such as Taj, the oberoi and the ambassador were well established when India became independent. After independence, the hospitality industry grew at a faster rate. Civil aviation developed rapidly soon after the Second World War. The introduction of international flight services in the year 1948 and additional services in the mid-1950s encouraged a lot of foreigners to visit India and also many international chains of hotel such as the Holiday Inn, the Sheraton, and the inter continental and so on, started their operations in India. The Oberoi group establishment the first franchised hotel with the Inter continental hotels in Delhi in the early 1960s. The people of India, in general did not Prefer dining out till the early 1960s. They always carried with them home made food to the workplace, school a while travelling. Even today, some people

carry food whenever they go out. Perhaps this could be one of the reason for dabbawalas, who are food vendors engaged in distributing meals in dabbas (Boxes) to clients at their workplaces, doing so well in Mumbai. In South India, people used to packed food such as lime rice, tamrind rice and curd rice from vendors. In the north, bhojanalayas served local dishes, especially roti, sabji and salad.

Indian Tourism development corporation (ITDC) was set up in 1966 with the developing & expanding tourism infrastructure in the country and thereby promoting India as a tourist destination. ITDC succeeded in achieving its objectives by promoting the largest hotel chain in India and providing all tourist services such as accommodation, catering, transport, in house travel agency and so on. For development of manpower to meet the growing needs of hotels, restaurants and other hospitality based industries. For this purpose, Institute of Hotel Management (IHM) and Food craft Institute (FCI) were established. These programme imparts adequate knowledge and training in the core operational and managerial areas of the hospitality industry. This makes the students understand the environment and execute their job professionally. In 2002, Ministry of Tourism (MOT) launched a programme called **Capacity Building For service provider** (CBSP) to train persons engaged in small hotels, dhabas, eating joints & and restaurants. Projects Priyadarshini was launched in 2005 to impart training to women in taxi driving/operation, entrepreneurship such as setting up souvenir kiosks and so on, to adopt tourism as their profession. People of different region in India have different style of food like Hyderabadi Cuisine, Avadhi Cuisine, Goan Cuisine, South Indian cuisine etc.

A lot of foreign food service organization such as McDonald's, Pizza king, Dominos, subway and soon, have set up their operation in India, which has made local restaurant fine-tune their operations in order to compete with these outlets. Nirula's and Haldiram in the north and Saravana Bhavan, Adyar Ananda Bhavan and Annapoorna in the South are doing well in the food service Industry.

Radhakrishna Hospitality Services offers Catering services to industries and schools in a big way. Wineries, especially the ones in Maharashtra, are coming out with wines to complement Indian dishes. The food service sectors continually change their style of operation to meet the changing needs of the customers. Today we have top quality restaurants in India that are comparable with international standards.

CHECK YOUR PROGRESS- 1

Q-1 Define food & beverage service Industry.

.....

Q-2 Explain the nature of Service.

.....

Q-3 Give the History of food & beverage service Industry.

.....

8.8 Major Establishments in Food & Beverage Service Industry

The food & beverage service Industry provides millions of meals a day in a wide variety of types of food & beverage Industry. Food & beverage service industry includes various types of restaurants, Bar, Cafes, Cafeterias, take-aways, canteens, function halls, tray service operation, lounge service operations, home delivery operations and room service operations for hotel guests. Some examples of the types are as follows.-

Restaurant: A restaurant is a place where food and beverage are sold and served to customers. There are different types of restaurants that have evolved to meet the dynamic demands of consumers. The lifestyle of people is continuously changing and so are their eating habits. The owner of restaurant must consider the menu, service hour, mode of service, expenditure potential of the customer, the time the target customers are likely to spend on dining and so on, to satisfy the changing needs of customers and to sustain themselves in an ever changing market environment.

Bistro: It is small restaurant that serves simple, moderately priced meals and wine. The menu consists of dishes that are simple and easily prepared in bulk. Braised meats are typical dishes that are provided in a bistro. It serves coffee as well. The services are formal and quick. It may not have printed menus.

Brasserie: It is formal restaurant, which serves drinks, single dishes and other meals one can have just a drink or coffee. It extends professional service and presents printed menus. The waiters are in traditional uniform of long apron and waist coats.

Coffee shop: It is a restaurant that mainly serves snacks and beverages 24 hours a day, however it may serve all the three meals. Most star hotels have coffee shop to Cater to the needs of customers at any time of the day. This

coffee shop concept has come from the USA. The service and ambience of the coffee shop are informal. The furniture and service equipment are not very expensive. Covers are laid on place mats. A "Cover" is a term, referring to a place setting with necessary, cutlery, crockery and glassware required at the beginning of the service for one person. This term also refer to the seating capacity of a good service area.

Specialty restaurant: It serves specialty dishes which are its strength and contribute to the brand image. It operates during luncheon and dinner hours, between noon and 3 P.M and between 7 P.M and 11 P.M. The ambience and decor of the restaurant reflect the theme of the specialty restaurant. It may specialize either in a particular type of food such as fish and chips, pastas or steaks, or in a particular type of cuisine, for example Indian, Chinese, Italian, Mediterranean and so on.

Fine dining Restaurant: This kind of restaurant primarily caters to the requirement of the affluent market segment which wants to experience fine dining. The restaurant may either offer dishes of one particular region or country or exotic dishes from various cuisines, wines, spirits and digestives. It is open mostly by during dinner time. The ambience and décor of the restaurant will be elegant are rich. The dining chair has arm rest. All the tables will be covered with good quality linen and napkin.

Popular Restaurant: This type of restaurant is informal, yet hygienically kept and it is located in a busy area such as bus stands, railway stations, shopping area and so on, catering to the requirements of the middle class and the customers who are in a hurry. The restaurant is generally quite large with more number of covers. It serves the dishes that are very popular and highly demanded in that area, quickly and at moderate prices. The menu may either be displayed on a board at a prominent place or printed and laminated.

Dhaba: It is a roadside Food stall found on national and state highways mainly catering to the requirements of heavy vehicle crew. It specializes in Punjabi cuisine and tandoor cooking. Serving very limited dishes, which are freshly prepared. The service is very informal and there is hardly any cutlery used. The dishes are kept on the table with service spoons for customers to help themselves. Coir cots are used for the customers to sit on and a narrow table is used for placing the dish and eating. The dishes served here are inexpensive and taste like home-made food. It offers both vegetarian and non-vegetarian dishes.

Fast food outlets: The fast food concept was first introduced in the USA and now it has become popular around the world. It is characterized by the speed of service and affordable price of the menu items. They are specializing in a particular products like burger, pizza and so on. Food products can be prepared quickly and kept for a short while without spoilage. Food can either be eaten in the premises or taken away as packed food. In India, Pav Bhaji, bhel, pani puri, samosa, kachori, kabab paratha, poori bhaji, chole bhatura, varieties of dhosa and so on are served as fast food items.

Rotisserie: This type of restaurant specializes in grilled or roast meat, poultry and fish, which are prepared in front of the guests. The griller is operated either by gas or by electricity. The guests can see the way their chosen cuts are being cooked through a glass partition. The cooked meat is served on a plate by the food service staff along with salads, potatoes and accompanying sauce. The décor of the restaurant may be moderate. Wine and beer may also be served.

Carvery: It is a restaurant serving roast meat and poultry, which are carved at the carving counters by a carver in the presence of guests. Accompanying sauces and vegetables are served with the roast. Table d'hôte (fixed) menu of three or four courses with roast meat or poultry as the main course is offered.

Barbeque restaurant: This kind of restaurant specializes in barbeque dishes, both vegetarian and non-vegetarian delicacies. The marinated pieces of meat, poultry, fish, vegetables, Paneer and so on, are inserted into skewers and cooked over live charcoal or electric griller. Frequent basting with marinades and oil is done during cooking, which fills the area with aroma. It serves as an excellent tool of merchandising. The aroma of barbeque dishes and the way they are prepared and presented make people buy them. It is generally located near a swimming pool, roof top, lawn, sea, and so on, and is open during evening hours. Western and Indian.

Bar: It offers all kinds of spirits such as whisky, rum, gin, vodka, brandy, tequila, wines and beers. Hotels and restaurants have a separate licensed area to sell these alcoholic drinks. Snacks are also offered. Hotels may also have an additional bar in the service area/ restaurant to dispense wines, beers and spirits during the service, called a dispense bar.

Pub: It mainly serves various kinds of beer, especially draught beer and snacks. It has been borrowed from the concept of **public houses** in England. Pubs were owned by breweries (beer manufacturing firm) to sell their beers. In India cities like Mumbai & Bangalore have some of the finest pubs.

Night Club: It operates during the night and offers dinner, dance and live entertainment. Cabarets or floor shows are the main attraction of the night club. Couples can dance on the dance floor to music performed by the live bands or to recorded music. Guests are required to wear formal dress. Dinner and wine are served at the table and guests can have their meal while enjoying the show. In India, some metro cities have night clubs.

Discotheque: It operates during night hours. It provides a dance floor for guest to dance on. Special sound and lighting effect is created for an appropriate ambience. Drinks, especially beer, and snacks are made available during the operations. The service is very informal. It is patronized mostly by the youth and couples. Dress code is not insisted upon. It is generally located in hotels as well as in the malls. The entry is limited to a certain number of guests according to the floor/room capacity.

Ice Cream Parlour: It serves different kinds of ice creams- sundae, coupe, bombe, cassata and so on. These ice cream containers are kept in refrigerated

displays with see through glass. Some ice cream manufactures have introduced sugar-free and cholesterol-free ice-creams. The seating arrangement and service are very informal name of ice-creams available are displayed on brand with pictures to market the products. Ice creams are served with wafer biscuits and sweet sauces and nuts. Guest may either eat in the premises or have it packed any carry.

Cafeteria: The traditional cafeteria system consists of a straight line of counters containing a variety of hot and cold dishes. The customers start at the end of a line, pick up a tray and move along the length of the counter as they select dishes they want to have. The cashier who is seated at the end of the counter makes bills for the items selected and collects payment. This form of service is widely followed in institutional and industrial establishment.

Food Court: It refers to a number of independent food stalls, each serving different items food. The customers order the food items they want to have and consume them at a common dining area. The types of dishes that is popular globally. Food courts are found in big shopping complexes, entertainment complexes, amusement parks, airports and so on, where there is a heavy traffic of customers. It is mostly self-service waiters may assist in clearing the table and serving water.

Kiosks: A kiosk is a small permanent or temporary structure and side walk from which items such as coffee, tea, chocolates, pastries and so an, may be sold. The items may either by taken away or consumed at tables arranged nearby. Most kiosks do not love seating provision.

Drive in: In a drive-in restaurant, customers drive in park their vehicles at a parking lot, and remain seated in their vehicles. The waiters go to the customers with menu cards, collect orders and deliver the food items on specially designed trays and the customers remain parked while they eat.

Banquets: Banquets is the highest revenue generating section of food and beverage department. Various types of functions like conferences, board meetings, cocktails parties, weddings, state banquets, etc are organized in the banquet room or hall of a hotel.

Check Your Progress- 2

Q-1 Define the coffee shop.

.....

Q-2 Give the features of a popular restaurant.

.....

.....

Q- 3 Give difference between Bar & Pub?

.....

8.9 Summary

India, a popular country, has very good potential for the development of food & beverage service industry. The number of people availing the services of food & beverage industry is steadily increasing due to their increased disposable income. Eating out in future will not be a luxury but an essential activity. The food & beverage service industry is different from other industries in satisfying the needs of customers. It satisfies one of the most important physiological needs of the consumer, that is, of hunger and thirst. From last decade food & beverage Industry is expanding very fast.

8.10 Glossary

Auguste Escoffier: The most famous French chef, known as the emperor of chefs.

Inn: A house providing food, beverage and accommodation.

Food service: Food service is an operation in which products/services are created and delivered to the customer almost simultaneously.

Dhabha: It is a roadside food stall located at national and state highway specialize in tandoori and Punjab style of cooking.

Table d'hote Menu: Table d' hote menu is a restricted menu, offering a small number of courses (three or four) a limited choice within each course, fixed selling price and all the dishes being ready at a set time.

Coffee Shop: It is a restaurant open round the clock, providing a multi cuisine menu.

Banquet: An outlet that caters to the service of food and beverage to a large gathering of people.

Bar: An outlet that primarily serves alcoholic beverages.

Specialty restaurant: A fine dining outlet in which service is both formal and stylish.

8.11 Check Your Progress- 1 Answer

Ans-1 Food or Beverage service is an operation in which product/service are created and delivered to the customer almost simultaneously. "To be of service literally means to attend to someone's needs. It involves helping, giving, sharing and meeting needs.

Ans-2 Nature of service is:

- (1) Services are partly or wholly intangible.
- (2) Services are consumed at the moment or during the period of production or delivery.
- (3) Services usually require interaction between the service provider and the customer/client/Guest.

Ans- 3 The hotel industry originated in the 6th Century BC and is perhaps one of the oldest endeavors. The earliest inns were just large halls where travellers slept on the floor along with the animals on which they traveled. These conditions prevailed for hundred of years until the mode of travel changed. The invention of the wheel, one of the greatest events in the history of civilization resulted in the production of quicker modes of conveyance. The speed of travel increased with the development of vehicles. With the advent of the Industrial revolution in England, travel for business gradually started increasing.

8.12 Check Your Progress- 2 Answers.

Ans-1 It is a restaurant that mainly serves snacks and beverages 24 hours a day, however it may serve all the three meals. Most star hotels have coffee shop to cater to the needs of customers at any time of the day. This coffee shop concept has come from the USA. The service and ambience of the coffee shop are informal. The furniture and service equipment are not very expensive. Covers are laid on place mats. A "Cover" is a term, referring to a place setting with necessary, cutlery, crockery and glassware required at the beginning of the service for one person. This term also refers to the seating capacity of a good service area.

Ans-2 This type of restaurant is informal, yet hygienically kept and it is located in a busy area such as bus stands, railway stations, shopping area and so on, catering to the requirements of the middle class and the customers who are in a hurry. The restaurant is generally quite large with more number of covers. It serves the dishes that are very popular and highly demanded in that area, quickly and at moderate prices. The menu may either be displayed on a board at a prominent place or printed and laminated.

Ans-3 **Bar:** It offers all kinds of spirits such as whisky, rum, gin, vodka, brandy, tequila, wines and beers. Hotels and restaurants have a separate licensed area

to sell these alcoholic drinks. Snacks are also offered. Hotels may also have an additional bar in the service area/ restaurant to dispense wines, beers and spirits during the service, called a dispense bar. **Pub:** - It mainly serves various kinds of beer, especially draught beer and snacks. It has been borrowed from the concept of **public houses** in England. Pubs were owned by breweries (beer manufacturing firm) to sell their beers. In India cities like Mumbai & Bangalore have some of the finest pubs.

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8.15 Terminal Questions

Fill in the blanks

- 1- The concept of fast food was first introduced in.....
- 2- Silver service is implemented in aoutlet
- 3- Dhabas are located at.....
- 4- Non alcoholic beverages are served in.....and
- 5-is an outlet organized conferences and meetings.

Short Answer type Questions

- 1- Why the fast food outlets are very popular in India?
- 2- Give the difference between fine dining restaurant & popular restaurant?
- 3- Explain Bistro & Coffee shop?
- 4- Give the definition of hotel?
- 5- Give the Characteristics of the food & beverage service industry?
- 6- Give the difference between product & services?

Long Answer type Questions

- 1- Give a details note of food & beverage service industry?
- 2- Explain the history of food & beverage service industry in India?
- 3- Explain the major establishment in food & beverage service industry?

Unit 9: Food Service Operation

Structure

- 9.1 Introduction
- 9.2 Objectives
- 9.3 Food Service Operation
- 9.4 Organization of the food & beverage service department.
- 9.5 Duties & responsibilities of food & beverages service staff.
- 9.6 Different Ancillary Departments of F & B Service.
- 9.7 Inter-department relationship.
- 9.8 Summary
- 9.9 Glossary
- 9.10 Answers to Check your Progress
- 9.11 Further Reference / Bibliography
- 9.12 Suggestive Reading
- 9.13 Terminal Question

9.1 Introduction

In the last reading of Unit, “Classification of catering industry” we have learnt about Catering industry and their classification into Primary catering establishment and Secondary Catering establishment according to the Priority given to the provision of food and beverages. In this unit we are going to learn, about food Service operation, organization of food & beverage Department, Duties & responsibilities of their respective staff, different ancillary department of F & B service, and Inter-departmental relationship of F & B Service with other departments. We must know that, this department is the major revenue producing department in a hotel. In this unit you will understand that Food & Beverage Service department is a complex operation involving highly specialized tasks.

9.2 Objectives

By the end of this Unit, the student will understand and know about:

- ◆ Identify the operational areas in Food Service Operation.
- ◆ Understand how the food & beverage Service department is organized
- ◆ Learn the functions of different outlets.
- ◆ List and discuss the hierarchy of food and beverage service department.
- ◆ Describe the functions of the key Personnel of the department.

9.3 Food Service Operation

People staying away from home for some reasons depend on food Service Industry for their food and beverages, these sections in a hotel came under the control of food and beverage Service Department. The food and beverage service department of a hotel is the most labour intensive department. The F & B

Service department is a complex operation involving highly specialized tasks. For the case of operation food service is comes under these sections.

1. Pre- Customer arrival Preparation - The Service staff have Plenty to do before the Customers arrive. These jobs include cleaning and Polishing, taking booking (reservation), Setting the tables and back-up preparatory tasks. Wiping of glass, Crockery and cutlery spotlessly. Arranging table and chairs with proper cover. The table set up is correct, the silver is polished and chinaware and glassware are spotlessly clean. Floor/ Carpet is clean and dry. The restaurant and back area are in a state of readiness before the Service session commence. The head water is usually responsible for keeping the booking diary. Reservations for restaurants are usually made by telephone. The Place on the table for dinner/ lunch is called **cover**. The middle of each cover should be marked with a 'centre guide' round which to position the cutlery, crockery and glassware. The Centre guide could be plate or an unfolded napkin. Placing knife, fork, glassware on the cover. Place of cutlery and crockery the students will know in upcoming units. A simple table decoration, often of flowers or candles, is placed in the middle of the table. Finally a folded napkin is placed in the middle each place setting.

Mise-en- scene – This French term means to prepare the environment of the outlet before service. It involves cleaning the serve area, table, chairs, side station, trolleys or any other service equipment. This operation generally proceeds mise-en-place.

Mise- en – place - This French term means to put in place. It is widely used in the food and beverage service department in every day hotel operations. Before service commences, the staff should ensure that the outlet is in total readiness to receive guests. This is an ongoing process and needs to be done in all outlets of the food service department.

2. Guest Arrive- How guests are received is very important. Greet the guest warmly, by wishing them the time of the day. Escort the guests to the table and seat them promptly by pulling the chairs out to ease seating. Place the chair behind the guest's knees and move it in under as he sits down, using a knee as well as your hands to keep the chair steady. Let the guest settle themselves. Ensure that children have high chairs and special attention is paid to the elderly. Remove extra cover if any from the table. Serve the water and present the menu card. Common styles of presenting menus include placemats, single cards and folded cards. Menu are two types, a la carte menu offer a large number of courses with each dish priced individually are used in most circumstances, table d' hote menu is a fixed number of dishes with a set price at a set time to serve. The style of the menu must affect, the way in which it is presented. Taking orders is an important skill which must be learnt. It is not easy as to might seem to make sure that you customers each receive exactly what they have ordered and that they are properly billed for what they have had. If the order has to be taken, offer suggestions to the guests in the choice of food & beverages and repeat the final order to avoid any errors.

3. During the meal - When all the dishes in each courses are ready the waiter collect the food from kitchen. There will be side board in the restaurant, ideally one for each waiter's station. Collect the food from the kitchen on a tray and put it on the side board before unloading the tray and taking the dishes to the table by hand. Serve the food on the guest table on the basis of type of table service (either silver service or pre plated service). Ensure that service is fast, efficient and pleasant. Properly serve the accompaniment of each dish to the guest in proper portion and serving temperature.

4. Clearing the table: Plates should not be taken from the table until all the dinner/ lunch has finished. The usual sign that people have finished even if there is food left on their plates, is that they push the remaining food to one side of the plate and place their knife & fork together. Remove plates from the table by taking them from each customer's right.

5. Billing: Be sensitive to what your guest wants. If the bill is presented too soon, guest may be offended, feeling that you are trying to push them out. On the other hand, it is extremely annoying for dinner, if they have limited time, to be kept waiting for the bill. The waiter must be alert to signs that the bill is wanted. People will usually be ready for the bill as soon as they have fined their meal. Bring the bill in a bill folder and kept on the right hand side of the guest table. Do not stand about waiting for your customers, to pay, leave them alone so that the host can check the bill. When the host can check the bill, he or she will put money or credit card on bill folder for you to collect. After the payment is cleared, pull out the chairs or the table to enable guests to move out comfortably. Warmly wish them and request them to visit again. Clear the table immediately and reset for the next guest. Have the side board cleared and restacked for the next sitting.

9.4 Organization of the Food and Beverage Service Department

The department can achieve its predetermined objectives efficiently if every employee knows the part he is to play in the team operation and how his/her role relates to the others and contributes to attaining the overall objectives. Every employee is given his/her duties and responsibilities in the hierarchy of reporting. This is done in organizing, which is one of the managerial functions. Organizing is the process of:

- Identifying and classifying the activities to be performed
- Grouping of activities necessary to attain the objectives
- Assigning of each grouping to a manager with authority necessary to supervise it (delegation)
- Providing for coordination horizontally and vertically in the organization
- It may be summarized as 'organization is the process of identifying and grouping the work to be performed, defining and delegating responsibility and authority, and establishing relationships for the purpose of enabling people to work most effectively together in accomplishing objectives'.

An organization's structure must clearly state who is to do what and who is responsible for what results. Though an organization implies many meanings to

many people, for most practicing managers, it means 'formalized intentional structure of roles or positions'.

The food and beverage manager identifies the nature of work to be carried out in each area of the food and beverage department and identifies positions and draws job description for each, in liaison with the personnel manager to establish formal organization structure. The organization chart of Food & Beverage Service department is shown in **figure 9.01** on page 162.

9.5 Duties & Responsibilities of Food & Beverage Service Staff

The food & beverage service department usually has the largest staff. Able leadership and supervision is required to effectively direct the department and guide the staff. The personnel in the food & beverage service industry require practical knowledge of operations of all outlets is essential to provide the guest with quality service at all times.

Job Specification - Job specification is a document that contains information about the skills and qualities required for a position. It includes information such as personal qualities, skills, formal education, technical qualification, work experience, previous training, physical skill & Communication skill.

Job description - It is a document that contains duties, responsibilities and all the tasks that constitute a job position. It specifies the parameters within which a job is done. It not only includes duties and responsibilities but also contains report relationships, working conditions, authorities and control, coordination with other departments, status within departmental hierarchy, equipments and materials to be used and other information specific to the hotel.

Job Description	Job specification
Job Title :- Department :- Scope :- Responsible to :- Main Duties & Responsibilities :-	Job Title :- Sex :- Age :- Qualification :- Desirable Qualifications :- Technical :- Experience :- Qualities :- Conditions of Employment :-

JOB DESCRIPTION OF FOOD & BEVERAGE MANAGER

Duties & Responsibilities:

1. To maintain efficient catering services within the hotel for the markets previously identified in the marketing and catering policies.
2. To maintain effective control of raw material, labour and equipment costs used in the Food and Beverage Departments.
3. Co-operate with heads of Departments in producing Departmental budgets for approval by the Chief Accountant.
4. To be responsible for achieving required revenue and profit targets for, all selling outlets, maintaining the agreed standards of Food and Beverage production and service as laid down in the catering policy.

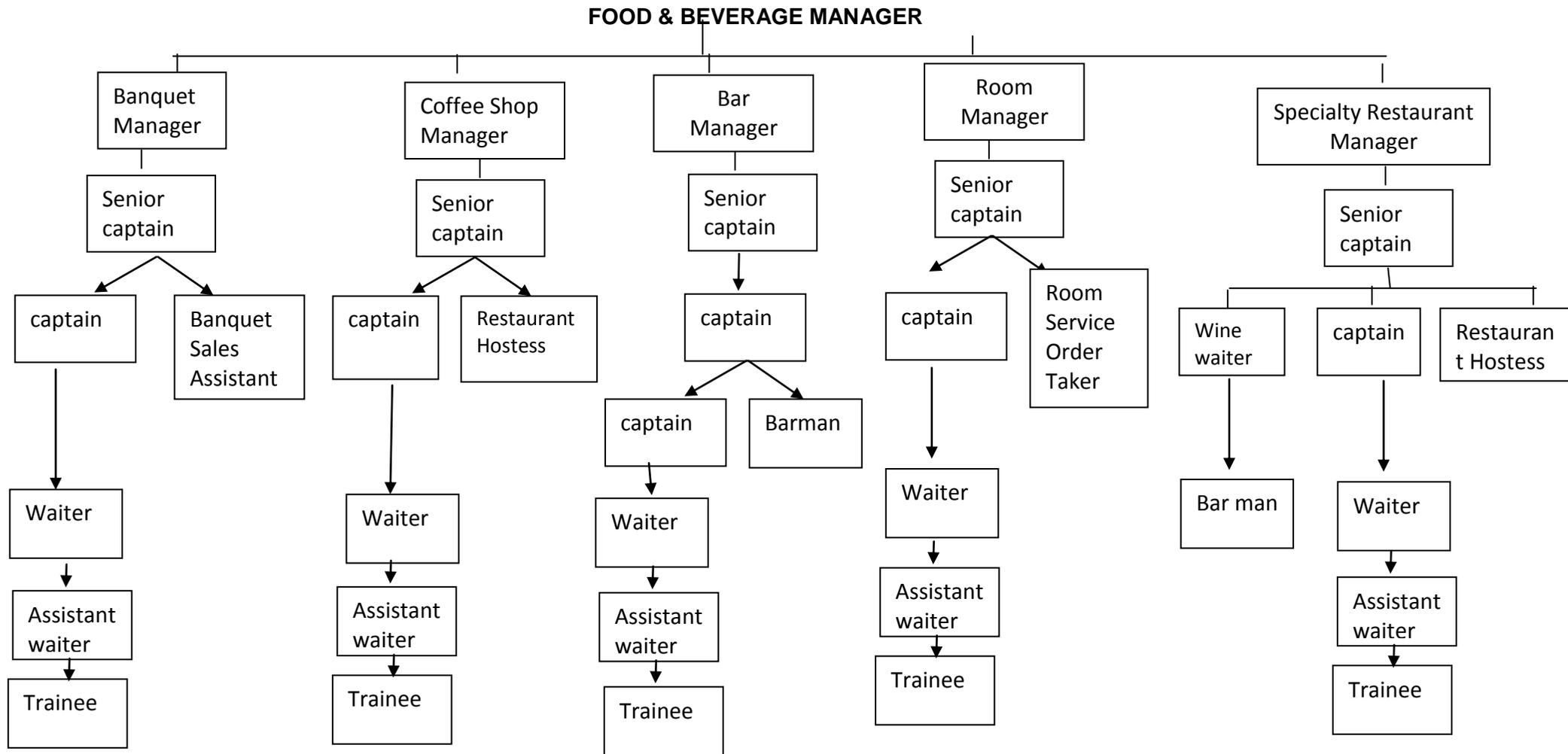


Fig. 9.01 Organization Chart of Food & Beverage Service Department

5. Co-operate regularly at staff meetings with the heads of Departments, together comprising the Food and Beverage Department.
6. To be responsible for Hygiene and safety standard in the Food and Beverage Department and ensure all legal requirements are met.
7. To be prepared to attend any other staff meeting as arranged by the general manager.
8. Co-operate with the personnel Department in the recruiting and training of new personnel for the Food and Beverage Department.
9. In consultation with the chef and based on the availability of ingredients and prevailing trends, the Food and Beverage Manager should update and if necessary compiling new menus. New and updated wine lists should also be introduced regularly.
10. Ordering of stocks.

JOB DESCRIPTION OF ASSISTANT FOOD AND BEVERAGE MANAGER

Duties & Responsibilities

1. The assistant Food and Beverage Manager assists the Food and Beverage Manager in running the Department by being more involved in the actually day- to-day operations.
2. Assisting section heads during busy periods.
3. Taking charge of an outlet, when an outlet manager is on leave.
4. Setting Duty schedules for all the outlet Managers and monitoring their performance.
5. Running the Department independently in the absence of Food and Beverage Manager.

JOB DESCRIPTION OF RESTAURANT MANAGER

Duties & Responsibilities

The restaurant Manager is either the coffee shop Manager, Bar Manager or specialty Restaurant Manager.

1. The Restaurant Manager reports directly to the Food and Beverage Manager and has overall responsibility for the organization and administration of a particular outlet or a section of the Food and Beverage service Department.
2. Setting and Monitoring the standards of service in the outlets.
3. Administrative Duties such as setting Duty charts, granting leaves, monitoring staff position, recommending staff promotions and handling issues relating to discipline.
4. Training the staff by conducting a daily briefing in the outlet.
5. Playing a vital role in Public relations, meeting guest in the outlets and attending to guest complaints, if any.
6. Formulating the sales and Expenditure budget for the outlet.
7. Planning Food festivals to increases the revenue of the outlet along with the chef and the Food and Beverage Manager.

JOB DESCRIPTION OF ROOM SERVICE MANAGER**Duties & Responsibilities**

1. The Room Service Manager reports directly to the Food and Beverage Manager and is responsible for the Room Service outlet.
2. The Room Service Manager checks that the service rendered to the guests conforms to the standards set by the hotel.
3. He also monitors all operational aspects of the outlet such as service, billing, Duty charts, Leave and absenteeism, in addition to attending to guest complaints regarding Food and Service.
4. The Room Service Manager is also in charge of the sales and Expenditure budget. Since Room service is the outlet which is most liable to have problems, the Room service Manager should ensure co-ordination among the Room service order taker, the captain and the waiter.
5. It is necessary for the Room service Manager to be present in the outlet during Peak hours to interact with other departments of the hotel and to take regular inventories of all the equipment used.
6. In the Event of the hotel offering valet service, the room service managers takes charge of that service as well.

JOB DESCRIPTION OF BAR MANAGER**Duties & Responsibilities**

The Bar Manager is responsible for all functions of the bar and the dispense bar. The responsibilities of a Bar Manager include the following:-

1. Recruiting staff and training them for a bar operations.
2. Monitoring performance and activities of bar ad dispense bar.
3. Supervising alcohol service and forecasting volume of sales.
4. Maintaining a close watch on movement of bottles and formulating beverage control system.
5. Preparing budget for bar and dispense bar.
6. Purchasing bar equipment & identifying alcoholic beverage suppliers.
7. Handling records of stock & sales report.
8. Handling guest's complaints

JOB DESCRIPTION OF BANQUET MANAGER**Duties & Responsibilities:-**

1. The Banquet Manager too is responsible for the functioning of his outlet, but as the Banquet outlet is a major revenue earner in the food & Beverage Department, the work load is more intense and heavier.
2. From the time the Bookings are done till the guest settles the bill, the Banquet Manager is in charge of all areas of Banquet and conference operations.
3. Banquet Manager supervises the work of the Banquet sales assistances who do the Banquet Bookings and the captains and waiters who perform the service activities under his guidance.

4. He is responsible for organizing everything right down to the finest detail.
5. The Banquet Managers projects the Budget of the Banquets, and works in close co-ordination with the chef in setting menus.
6. He is responsible for making an inventory of all the Banquet Equipment and maintaining a balance between Revenue and Expenditure.

JOB DESCRIPTION OF ASSISTANT BANQUET MANAGER

Depending upon the size of the Establishment and the number of Banquet Halls, there may also be an Assistant Banquet Manager, who maintains Banquet records, takes bookings and monitors correspondence.

Duties & Responsibilities

1. He ensures the smooth operations of all functions, by giving clear and precise instructions to the concerned staff,
2. This job can also be done by a Banquet Sales Executive or Banquet sales assistant.
3. The Assistant Banquet Manager is in charge of the actual performance of the function held in the Banquet Department.
4. He Co-ordinates with the senior captain and is in charge of inventories, Billing and briefing.
5. He also deals with complaints from the guests and co-ordinate with various agencies for Banquet Requirements.
6. The Assistant Banquet Manager, should be aware of all that is happening in the Banquet outlet, as he is responsible for the success of each Banquet from the beginning to the end.
7. An Assistant Banquet Manager performs both the functions of Managing the office and Monitoring Banquet operations.

JOB DESCRIPTION OF BANQUET SALES ASSISTANT

Duties & Responsibilities

1. They are responsible for Managing the Banquet Reservation system in the Banquet office.
2. They normally work in shifts and take bookings for all functions to be held in the Hotel.
3. They prepare the function prospectus (FP) or Banquet Function Contract (BFC) that contains all the details of the proposed function, according to the guest's needs.
4. They co-ordinate closely with the Banquet operational staff to ensure that the function is planned as specified in the Booking form.
5. They interact closely with the other Departments of the Hotel, on behalf of the operational team in the Banquets.
6. They report to the Banquet Manager.
7. Team work is the watchword in any food and Beverage. service Department. A dedicated and committed team, with able leadership,

under ideal working conditions, help in fulfilling the establishment's ultimate goal of guest satisfaction.

JOB DESCRIPTION OF SENIOR CAPTAIN (MAITRE D' HOTEL)

Duties and Responsibilities:-

1. This senior captain has overall responsibilities for operations.
2. He prepares the Duty charts in consultation with the outlet manager.
3. He oversees the mise –en- place, cleaning, setting of the outlet and staffing to ensure that the outlet is always ready for service.
4. The senior captain receives the guests and hands them over to the captain or station holder.
5. He takes orders from guests if the captain is unable to do so.
6. The senior captain should be an able organizer and also be prepared to take over the duties of any member of the staff as and when required.

JOB DESCRIPTION OF CAPTAIN (CHEF DE RANG)

This position exists in Large Restaurants, as well as in the Food & Beverage service Department of all major Hotels.

Duties & Responsibilities

1. The captain is basically a supervisor and is in charge of a particular section.
2. A Restaurant may be divided into sections called stations, each consisting of 4 to 5 tables or 20 to 24 covers.
3. A Captain is responsible for the efficient performance of the staff in his station.
4. A captain should possess a sound knowledge of food and Beverage, and be able to discuss the menu with the guests.
5. He should be able to take a guest's order and be an efficient salesperson.
6. Specialized service such as Gueridon work involves a certain degree of skill, and it is the captain who usually takes the responsibility to do this work.

JOB DESCRIPTION OF WAITER (COMMIS DE RANG)

Duties & Responsibilities

1. The waiters serve the food & Beverage ordered by a guest and are part of a team under a station captain.
2. They should be able to perform the duties of a captain to a certain extent and replace the captain if he is busy or not on duty.
3. They should also be knowledgeable about all types of Food and Beverages, so that they can effectively take an order from a guest, execute the order and serve the correct dish with its appropriate garnish and accompaniment.

4. He should be able to efficiently co- ordinate with the other staff in the outlet.

JOB DESCRIPTION OF TRAINEE

Duties & Responsibilities

1. The Trainee work closely with the waiter's fetching orders from the kitchen and the Bar, and cleaning the side station in a restaurant.
2. He serves water and assists the waiter.
3. He is mainly responsible for the mise-en-place, and stacking the side board with the necessary equipment for service.

JOB DESCRIPTION OF WINE WAITER (SOMMELIER)

Duties and Responsibilities

1. His job is to take orders for the service of wine and alcoholic beverages and serve them during the meal.
2. They should have a good knowledge about wines that accompany a particular dish and the manner in which they should be served.
3. They should also be aware of Licensing Laws.
4. He should be efficient salespersons.

JOB DESCRIPTION OF ROOM SERVICE WAITER (CHEF D' ETAGE)

Duties and Responsibilities

1. Room service waiters work in the Room service outlet, serving both Food & Beverage to guests in their rooms.
2. The orders is placed by the guest on telephone, and is recorded on a kitchen order Ticket (K.O.T)
3. The Room Service waiter, who has been assigned that order, sets the tray according to the Food or Beverage ordered, picks up the orders when it is ready and serve it to the Guest along with the check, either for payment or signature.
4. The service should be prompt and efficient as one lapse means a complaint about service and a dis-satisfied Guest.

JOB DESCRIPTION OF ROOM SERVICE ORDER TAKER

Duties and Responsibilities:

1. Room service order taker records all orders of food & beverage from a resident guest over the telephone.
2. He records the order on a kitchen order ticket (K.O.T.) and passes it to the captain.
3. The room service order taker is responsible for all communication between the guest and the staff of the room service outlet and hence should have good communication skills.

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Q.9 Explain the duties and responsibilities of Assistant F & B Manager.

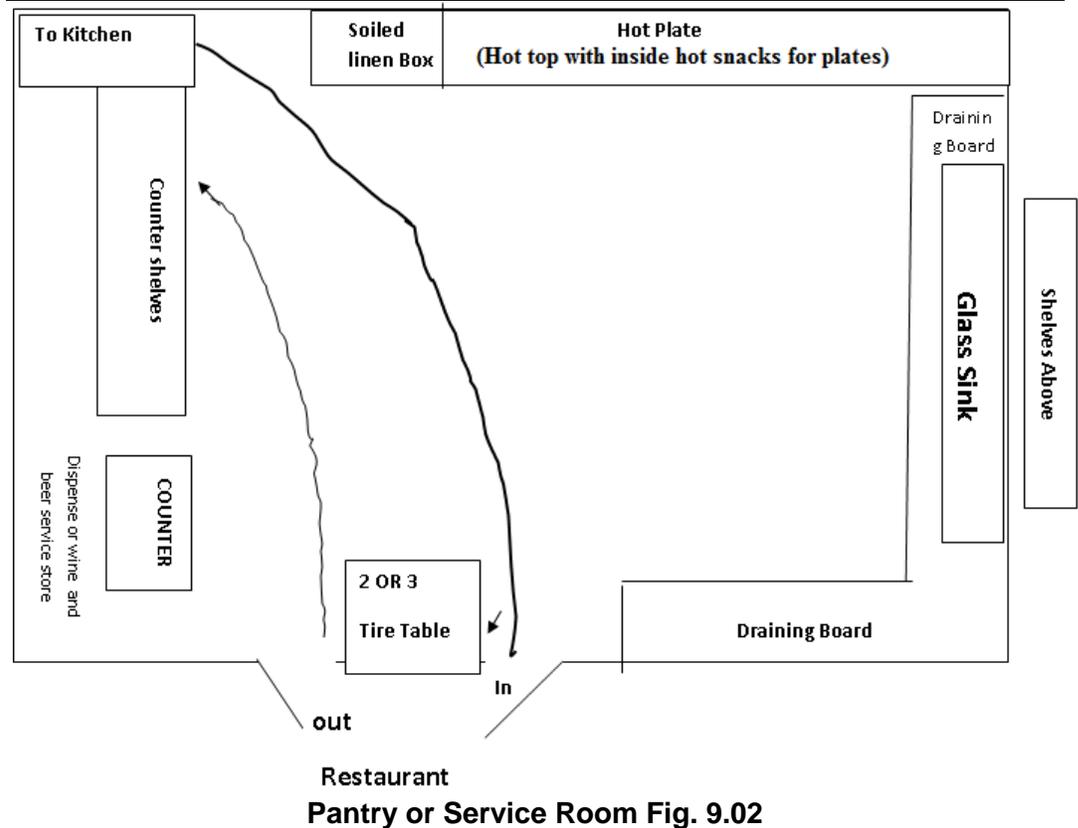
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9.6 Different Ancillary Department of F & B Service

1. SERVICE ROOM OR PANTRY

A clean and orderly service -room is essential to an efficient restaurant. A service-room or pantry contains shelves or cupboards for stacking glassware etc., a table (very often **of two** tiers) to take the dirty plates and silver brought in from the restaurant, a box or boxes for dirty table silver, bins for rubbish, and sinks with hot and cold water and draining racks, for washing glasses. If a small service-lift is used, then more shelves should be available alongside it to facilitate the service during peak hours. In some establishment the glass pantry is a separate unit staffed by those who are used to handling glassware. A large linen-box (similar to a post-box but with a larger "month") should stand in one corner to receive to received used table napkins, tablecloths, etc. If this box has a flat top it can easily be used for extra service space.A "hot-plate" (a specially heated table-cupboard with a hot flat top, inside which a supply of hot plates can be kept), forms an essential part of the equipment.

Generally there is also a dispense bar or "wine stores control" adjoining the pantry, so that waiters or waitresses can collect orders for wines, beers, minerals, etc., ordered by the customers. There should be two doors connecting the service-room with the restaurant: one should be used by waiters going from the service-room to the restaurant, and the other for their return. In well-regulated establishment. It is an offence to use the wrong door, for by so doing serious accidents and clashes can happen.



The words "In", "Out" will probably be marked on the doors. **fig. 9.02** illustrates a well-designed service-room or pantry.

A waiter leaving the restaurant with used materials puts the dirty plates, properly stacked on the table provided, and the dirty silver in the appropriate boxes. (These tables and boxes should be as near the exit door from the restaurant as possible and between the door and the service lift if there is one, in order to save fatigue and consequent breakages). He then goes to the service-table, in the service-room or in the kitchen, to collect the next set of dishes ordered by the customer, takes the plates from the hot plate, and re-enters the restaurant.

2. STILL ROOM

Main function of the still Room is to provide items Food and Equipment required for the service of a meal. The Duties performed in the still Room will vary according to the type of meals offered and the size of the established concerned. A wide range of Food items are offered and therefore to ensure their correct storage, preparation and presentation, a considerable amount of Equipment is used.

- Refrigerator - For storage of Milk, cream, Butter Fruit Juices etc.
- Butter machine -For portion control purpose
- Coffee machine -For preparation of coffee.
- Tea Dispenser
- Salamander
- Bread slicing Machine

3. WASH UP

The wash up is a most important Service Area the waiter should stack Trays of dirties correctly at the sideboard, with all the correct sized plate together and tableware stacked on one of the plates with the blades of the knives running under the arches of the forks. All glassware should be stacked on a separate Tray and taken to a separate wash-up point. The wash-up service area should be the first section the waiter enters from the Food service area. Here he/she deposits all the dirty plates, stacking them correctly and placing all the tableware in a special wire basket or container in readiness for washing. The waiter must place any debris into Bin or Bowl Provided.

4. HOT PLATE

Hot plate many be regarded as the meeting point between the food service staff and the food preparation staff. Co-operation between food service staff and food preparation staff will also ensure that all the dishes served are well and attractively presented. At the same time all orders written by the waiter must be legible to the **aboyeur** (Barker) so that there is no delay in "calling up" a particular dish. Also the food service staff queue at the Hot plate and not cause confusion by jumping the Queue.

5. PLATE ROOM

In large hotels plate or silver room, is a separate service Area. The large silver such as Flats, salvers, soup tureens will be stored on shelves with all the Flats of one size together and so on. All shelves should be labelled showing where each different item goes. This makes it easier for control purpose and for stacking. When stacking silver the heavier items should go on the shelves Lower Down and the smaller and lighter items on the shelves higher up. This helps to prevent accidents. All cutlery and flatware, together with the smaller items of silver such as Ashtrays, cruet sets, Butter dishes, special Equipment, Table numbers and menu holders are best stored in drawers lined with green baize. It helps to prevent noise and stops the various items sliding about the drawer.

6. KITCHEN STEWARDING

Kitchen stewarding is essential charged to maintain and preserve the cleanliness and condition of the china, silver, glassware, Equipment and working area of the kitchen. It usually has a pot wash where large vessels are cleaned and a wash area where service equipment is cleaned, washed and stored. In doing so that the steward department maintains inventories and supplies of all equipments, china and silver, scrubs and clean all the working surfaces and floor of entire kitchen. Kitchen stewarding Department are mainly in the back area, it is still one of the most Important Department. Strict vigilance can control wastage and keep costs down by monitoring, breakage, controlling supply of Gas and coal to the kitchen and co-operate with the maintenance Department and monitoring the **Garbage Disposal system** (G.D.S). Also the care of the employee's cafeteria is the charge of the steward Department. This Department plays an important role in the functioning of both the Food production and F&B service Department. It is headed by steward manager, who reports to the F&B manager.

9.7 Inter- Department Relationship

The food and beverage service department is the selling point of the Hotel. In order to enable maximum and efficient selling, other departments in a hotel also play important roles. It requires a working knowledge of other departments and their functioning to achieve this.

Food Production: In a service outlet, the F& B production has the most important role to play. Items prepared here are the ones that the service person sells. In the planning of any Restaurant, the first thing that comes to mind is the menu.

Kitchen Stewarding: This department is involved in the general cleanliness and upkeep of the kitchen. It has a pot wash where large vessels are cleaned and a wash area where service equipment is cleaned, washed and stored. This department also deals with the shortage and issue of all service and kitchen equipment and hence the controls are also part of this department. The kitchen stewarding department is headed by a chief executive steward or steward manager. The requisitions of the service equipment are done through a kitchen stewarding indent book with signature from the outlet manager, F&B Manager and chief Executive steward.

Accounts: The service department does not deal with the Accounts department directly but indirectly through various outlet cashiers. The cashiers receive the copy of the KOT and raise bill accordingly. They also have detailed information about credit card and discount policies, etc. The general account department deals with payments of the company like employee salaries, bill settlements, vouchers etc. On a day – to- day level, the dining room is in direct coordination with the cashiers, and on a weekly basis with the control of KOT books and discrepancies with regard to entries in the KOT, bill authorization of signature etc.

House Keeping: The House keeping department takes care of general upkeep of the Hotel. It undertakes periodic cleaning of all public areas including cleaning of carpet and polishing of fittings. Service personnel may call on house keeping staff to take care of occasional spillage, accidents etc. In the event of a guest's clothes getting spoiled, the house keeping staff will assist in laundering them, thus helping retain the customer. This department also organizes to have flower arrangements placed in the hotel. The book used in connection with house keeping is the linen book, which lists all service linen used and exchanged on a "One to One basis" of the more costly items in the overheads.

Engineering: This department takes care of the air- Conditioning, lighting, plumbing and general maintenance. Communication is done through the maintenance work order book and reminders are used if required. Good coordination with the department is vital for the upkeep of equipment and helps to prevent breakdown during service.

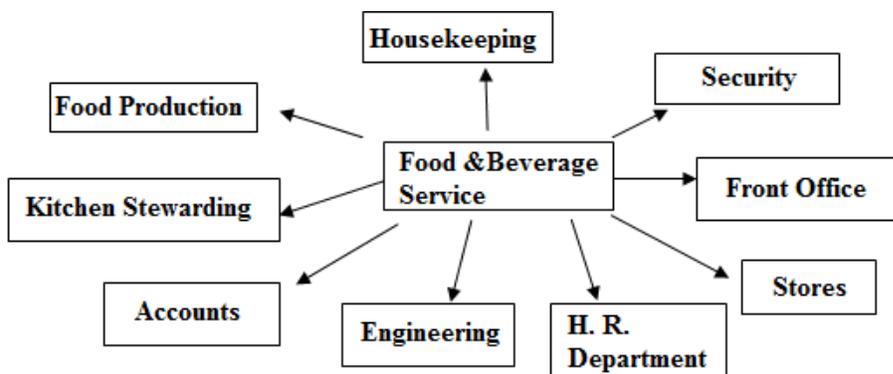
Front Office: This is a " Front of the - house " position and deals with the guest directly. The check –in, check-out, billing, information, reservation, bell desk, telephones etc. all come under this department. The front office department may also be in- charge of the health club, beauty parlor, business

centre and travel desk . All communication relating to the status of a guest (VIP, HG), group staying, company guests etc can be obtained from the front office. The dining room and room service need to coordinate with the front office for guest lists, billing instructions, amenities placement in rooms, problem handling during the night shift and other allied service.

Stores: This may be one or divided into separate areas such as food, liquor, materials, perishables etc. It may get its supplies through the purchase department gives the stores department its requirements of food items like proprietary sauces and seasonings and materials like doilies, paper napkins, candles, office materials, etc. through the corresponding indent book.

Personnel Department: All areas of staff requirement and employment are dealt by the personnel department in collusion with the concerned heads of departments (**HODs**). Any action to be taken regarding discipline will also be dealt with in the same way. This department is also in charge of the staff cafeteria, lockers etc. The service personnel get their leave applications processed and leave cards updated by the personnel department. This department also handles discrepancies in the time card. Job descriptions and job specifications are drawn up by this department in accordance with requirements from the individual departments. Recruitment, induction, training, evaluation and personality development programmes are also conducted by this department in the absence of a separate training cell.

Security:-This department handles the safety aspect of the organization. It is required to conduct safety and first aid drills, and fire fighting exercises. Security personnel also look into vehicle parking and are in close contact with the local police to look out for known criminals and Anti-social elements. Service personnel may use security personnel in case of drunks and unpaid bills. They have to maintain law and order in the establishment it and when difficult situations occur.



CHECK YOUR PROGRESS -2

Q.1 What is a still room ?

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Q.2 What do you know about Pantry?

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Q.9 Explain the importance of inter- department relationship of F & B Service.

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9.8 Summary

The activities of this Food & beverage service department are highly complex, demanding varied skill levels to perform the job. This department not only takes up the responsibility of food & beverage services but also organizing various types of function, events, conferences and so on. The type of people engaged in executing the food and beverage products and services should be given adequate training on various aspects of catering services. The Organization structure varies from hotel to hotel depending on the quality of staff, technology in use, production and service processes and so on. The organization must clearly communicate to the employees what they should do and should not. All the staff working in the Food & Beverage Department should have a thorough knowledge of the entire range of Food and beverages served, with their correct accompaniments, garnishes, service temperature of each dish and beverage and sequence in which they are to be served.

9.9 Glossary

Sommeliers: This is the person to handle the ordering and serving of wine. They must be thoroughly knowledgeable about their own wine lists and competent in helping guest to select wine appropriate to the food they order.

Captain: A supervisor of service staff in the food and beverage service department.

Brigade: The staff in the dining room or kitchen as an organized team.

Pantry: Storeroom, especially for crockery, cutlery etc.

Waiter's friend: Tool that is a combination of bottle opener and corkscrew.

Budgeting: An estimate of revenue or income and expenditure made by a company/ unit /hotel

Delegate: To entrust a task to another person.

Aboyeur: The person in a traditional kitchen brigade who controls the hotplate and is responsible for communication between kitchen and waiting staff and who "Calls up" the orders. Barker.

K.O.T.: Kitchen order Ticket

B.O.T.: Bar Order Ticket

9.10 Answers To Check Your Progress

CHECK YOUR PROGRESS-I

Ans -1 Mise-en- scene – This French term means to prepare the environment of the outlet before service. It involves cleaning the serve area, table, chairs, side station, trolleys or any other service equipment. This operation generally proceeds mise-en-place.

Mise- en – place - This French term means to put in place. It is widely used in the food and beverage service department in every day hotel operations. Before service commences, the staff should ensure that the outlet is in total readiness to receive guests. This is an ongoing process and needs to be done in all outlets of the food service department.

Ans -2 Job Specification - Job specification is a document that contains information about the skills and qualities required for a position. It includes information such as personal qualities, skills, formal education, technical qualification, work experience, previous training, physical skill & Communication skill. Job description - It is a document that contains duties, responsibilities and all the tasks that constitute a job position. It specifies the parameters within which a job is done. It not only includes duties and responsibilities but also contains report relationships, working conditions, authorities and control, coordination with other departments, status within departmental hierarchy, equipments and materials to be used and other information specific to the hotel.

Ans -3 The assistant Food and Beverage Manager assists the Food and Beverage Manager in running the Department by being more involved in the actually day- to-day operations. Assisting section heads during busy periods. Taking charge of an outlet, when an outlet manager is on leave. Setting Duty schedules for all the outlet Managers and monitoring their performance. Running the Department independently in the absence of Food and Beverage Manager.

CHECK YOUR PROGRESS-II

Ans -1 Still Room:- Main function of the still Room is to provide items Food and Equipment required for the service of a meal. The Duties performed in the still Room will vary according to the type of meals offered and the size of the establishment concerned. A wide range of Food items are offered and therefore to ensure their correct storage, preparation and presentation, a considerable amount of Equipment is used.

Ans -2 A clean and orderly service -room is essential to an efficient restaurant. A service-room or pantry contains shelves or cupboards for stacking glassware etc., a table (very often **of two** tiers) to take the dirty plates and silver brought in from the restaurant, a box or boxes for dirty table silver, bins for rubbish, and sinks with hot and cold water and draining racks, for washing glasses. If a small service-lift is used, then more shelves should be available alongside it to facilitate the service during peak hours. In some establishment the glass pantry is a separate unit staffed by those who are used to handling glassware.

Ans -3 The food and beverage service department is the selling point of the Hotel. In order to enable maximum and efficient selling, other departments in a hotel also play important roles. It requires a working knowledge of other departments and their functioning to achieve this.

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9. 12 Suggestive Reading

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9.13 Terminal Questions

Fill in the blanks :

1. The Person who controls the hot plate at service time is known as the _____.
2. Sommelier is responsible for the service of _____.
3. The French word for Room Service waiter _____.
4. The French word for waiter _____.

Short Answer type questions :-

1. What are the duties and responsibilities of a waiter.
2. Write short notes on
 - a. (i) Pantry (ii) Still room
3. Describe the duties and responsibilities of Captain.
4. Give the difference between Job Specification & Job description.

Short Answer type questions :-

1. Explain kitchen Stewarding department.
2. Explain ancillary departments of a restaurant
3. Give the duties and responsibilities of a Restaurant Manager.
4. Draw a neat staff organization chart of a first class restaurant.
5. How does F & B department Coordinate with other departments in the
 - a. Hotel.
 - b. Motel
 - c. Resort
6. Give the hierarchy chart of F & B department of hotel.

UNIT 10: MIS-EN-PLACE AND MIS- EN-PLACE

Structure

- 10.1 Introduction
- 10.2 Objectives
- 10.3 Briefing
- 10.4 Mis-en-Scene
- 10.5 Mis-en-Place
 - 10.5.1 Setting-up the Sideboard
 - 10.5.2 Preparing the Trolleys for Service
 - 10.5.2.1 Wine Trolley
 - 10.5.2.2 Hors d'oeuvres Trolley
 - 10.5.2.2 Salad Trolley
 - 10.5.2.3 Guerdon Trolley
 - 10.5.2.4 Cheese Trolley
 - 10.5.2.5 Dessert Trolley
 - 10.5.2.6 Liqueur Trolley
 - 10.5.2.7 Fruit Trolley
 - 10.5.3 Cover Set-up
- 10.6 Summary
- 10.7 Glossary
- 10.8 Answers to Check Your Progress Exercise
- 10.9 Reference / Bibliography
- 10.10 Suggested Readings
- 10.11 Terminal Questions

10.1 Introduction

In the previous units you have studied about Attributes, attitude, etiquette of food and Beverage Service staff, the present unit will provide you the knowledge about the mis-en-scene, mis-en-place and cover setup procedure in the restaurant. The restaurant is the hub of several activities before the actual arrival of the guests as well as at the point of his arrival followed by satisfactory service and his departure, further winding off operations. This also involves part preparation for the next service. This process is often referred to as the Restaurant Service Chain. The Restaurant Service Chain is therefore regarded as string of events that takes place before, during and after the service to the guests in the restaurant. The service chain consists of the following:

- Briefing
- Mis-en-scene
- Mis-en-place
- Setting up the sideboard
- Preparing the trolleys for service
- Cover set –up
- Restaurant Table Reservations
- Receiving and Seating a guest

-
- Taking an Order
 - Food and Beverage Service
 - Special Food Service
 - Cheese and Its Service
 - Tobacco and Cigars and Their Service
 - Coffee Service
 - Presenting The Check

In present unit we shall discuss the activities performed in doing briefing Mis-en-scene and Mis-en-place in the restaurant.

10.2 Objectives

After going through this Unit you will be able to:

- Know the meaning of briefing, Mis-en-scene and Mis-en-place,
- Process of briefing of restaurant staff,
- Knowledge of various activities to be undertaken in doing restaurant Mis-en-scene,
- Actions to be undertaken in Mis-en-place in a restaurant, and
- Understand the uses and preparations of different trolleys used in the food & beverage service.
- Meaning & set up procedure of the restaurant cover

10.3 Briefing

One of the most important interpersonal communication is carried out an hour before the restaurant is opens for public. **Briefing** is a meeting of the restaurant staff prior to the opening of the restaurant, while de-briefing is done when the restaurant closes. Briefing is an important event to analyze and evaluate the functioning of the restaurant. In this, first a regimented line up is developed where grooming, personal hygiene of waiters is checked followed by a discussion on events that marked the previous day operations highlighting the good points, bad points and their remedies. In this session the senior most member of the restaurant gives his instructions, checks on certain aspects of service and receives suggestions or problems of the staff.

Therefore the briefing is an important two way communication between management and staff that ensures that there is harmony in the thought process of both in executing service. The service staffs are required to come for the briefing in their proper uniform, equipped with KOT pads, waiter cloth, clean handkerchiefs, bottle openers, ball pens and cigarette lighters. There are certain points that each waiter should keep in mind before presenting himself for briefing:

- He should acquaint himself with the non available food and beverage item listed on the menu by asking the chef or referring to the 'non available items' board.
- They should ask the chef for the specials (**dish du jour**) of the day in order to push it to the customers.
- He should be fully conversant with the menu card and the beverage list of the day.

The restaurant In-Charge would normally check whether the waiter has satisfied the above points in addition would explain new house rules or policies to the staff and encourage an upward communication from the staff in terms of suggestions and problems. The waiter should be prepared to clarify doubts or give suggestions and ask questions.

Activities performed during briefing in a Restaurant

During briefing the restaurant manager checks the following:

1. Grooming standards of the server.
2. Uniforms are properly pressed and clean.
3. Finger nails to see that they are manicured and clean.
4. Their shoes are polished.
5. Servers' knowledge of non available items.
6. Servers' knowledge of the special of the day.
7. Equipments carried by the servers i.e. KOT pads, waiter cloth, clean handkerchiefs, bottle openers, ball pens and cigarette lighters.
8. Staff Grievances
9. Staff Feedback on operations of the previous day.
10. Staff suggestions for improving restaurant performances.
11. Knowledge of the menu.
12. The restaurant manager will also communicate the following:
13. New policies of the management.
14. Table reservation status
15. VIP's expected
16. Service standards that need re-enforcing.
17. Guest complaint and how they can be avoided.

18. Training tips
19. Revenue performance of the restaurant
20. Recognition for jobs well done.
21. Transfers, promotions, new staff and exits.
22. Encouragement and motivation.
23. Staff Schedules and table allotments.
24. Cost Control measures
25. New menu items
26. Management observations and suggestions.

10.4 Mis-En-Scene

The dining room is the hub of several activities before the actual arrival of the guests as well as at the point of his arrival followed by satisfactory service and his departure, further winding off operations. This also involves part preparation for the next meal. It is ideal to know the components not from beginning, but from the end because end is the beginning of preparation of fresh service.

Mis-en-scene refers to preparing the environment of the areas in order to make it pleasant, comfortable, safe and hygienic for the restaurant service. For the restaurant serving staff the restaurant is considered as the service area and it is expected from him to ensure that it should be made presentable enough to accept guests before each service session.

In a regular restaurant where all the three meals are served with a pause of few hours, the dinner is over around midnight. At this stage, the clearing of tables, sideboards, displays and decorations are over. A group of staff with a supervisor carries out the following activities step by step.

All the doors, windows are opened, curtains are withdrawn. All the lights are put at the brighter level, in case there is a regular dimmer. The whole dining room is thoroughly observed and scrutinized. The scrutiny is made on following lines:

1. Check for dirt
2. Check for unpolished metal surfaces
3. Check for stains on the carpets, curtains and tapestry

4. Check for all the electrical gadgets like bulbs, tube lights, power points, hot cases, display counters, pasta trolleys, pastry trolleys, microwave ovens etc.
5. Check for glass panes, fountains, artificial landscapes, water bodies, flora etc.
6. Check for damaged, broken furniture and fixtures.

Activities Performed During *Mis-En-Scene* in a Restaurant

1. Carpets are well brushed or hoovered.
2. All tables and chairs are serviceable.
3. Table lights or wall lights have functioning bulbs.
4. Menu cards are presentable and attractive.
5. Tent cards or other sales material are presentable.
6. Doors and windows are thrown open for sometime to air the restaurant. This should be followed by closing the windows and doors and setting the air conditioning or heating to a comfortable temperature.
7. Exchange dirty linen for fresh linen.
8. Table cloths and mats are laid on the tables.
9. Wilted flowers are discarded and fresh flowers requisitioned.

After the inspection of the restaurant is over, through inspection is done from the traffic side to the pantry as well as the front gate of the restaurant for any defects, including the lock of the doors and windows. At this stage, many of restaurants stack the tables and chairs one above the other to completely keep underside free to enable the house keeping the cleaning of floor or carpet. Similarly the tables and chairs are shifted the other side to complete the floor cleaning and put back as per regular layout plan of the restaurant.

CHECK YOUR PROGRESS- I

1) Discuss the role of briefing and de briefing in the restaurant operation?

.....

.....

2) Enlist the chief activities to be performed while doing Mis-en-scene in the restaurant?

.....

10.5 MIS-EN-PLACE

Mis-en-Place means putting in place and is the term attributed to the preparation of work place for ultimate smooth service. To ensure that the restaurant is ready for service the waiter makes sure that his station has been effectively prepared for the service. A station comprises of a given number of tables which are attended by a given team of waiters. Thus a restaurant may have several stations, each with a team of waiters. In large restaurants each station may be headed by a Captain or Chef –de-rang.

Mis-en-Place or preparation in which part of activity may be carried out immediately and part left for the morning or an hour before opening of a restaurant. The various steps involved are:

1. Shut the doors and windows and draw the curtains.
2. Keeping the light to the brightest level, set the tables and chairs according to reservations if necessary or required.
3. Spread the table cloths and all other linen as and where required like slip cloth (napperon), napkin (serviette), runner etc.
4. The activities of back area includes:
 - a) Washing, cleaning, wiping, sanitizing, drying, and polishing of cutlery, crockery, glassware, china, stoneware etc.
 - b) Removal of all wilted flowers, foliage from buds or flower vases for the purpose of substituting with fresh ones next morning (This may be done by the housekeeping)
 - c) In case of candle sticks, scrap the wax, wipe, clean and polish, less than half burnt candles are scraped, cut and fit in.

- d) Sauce bottles are replenished by discarding half filled and made into one, washed under running water. The neck from inner and outer side wiped, the cap cleaned and replaced.
- e) Cruet set polished and wiped. The free flow checked, perforations cleaned. The cellar or salt/pepper shaker should not be more than 2/3rd filled for convenience of shaking.
- f) Check, count, cluster and tie the linen, make a bundle, exchange from the linen room. Stack fresh linen in sideboard for recycling.
- g) Carry the cutlery, crockery, glassware from back area and stack them in the sideboards.
- h) Check all the cupboards, counters, doors, windows and lock before leaving in case restaurant remains closed for some time. Switch off the air conditioner and lights and deposit the keys with time office security (This is done only when restaurant is open only for lunch and dinner or open for dinner like in case of night clubs or discotheques).

When the restaurant is open round the clock like coffee shop, most of these activities are carried out even though the restaurant is open for public. In case of dining hall open for breakfast, the second phase of operation overlaps the previous one like table for breakfast laying is carried out easily in the morning. The following are the preparations to be done in the Mis-en-place of any restaurant:

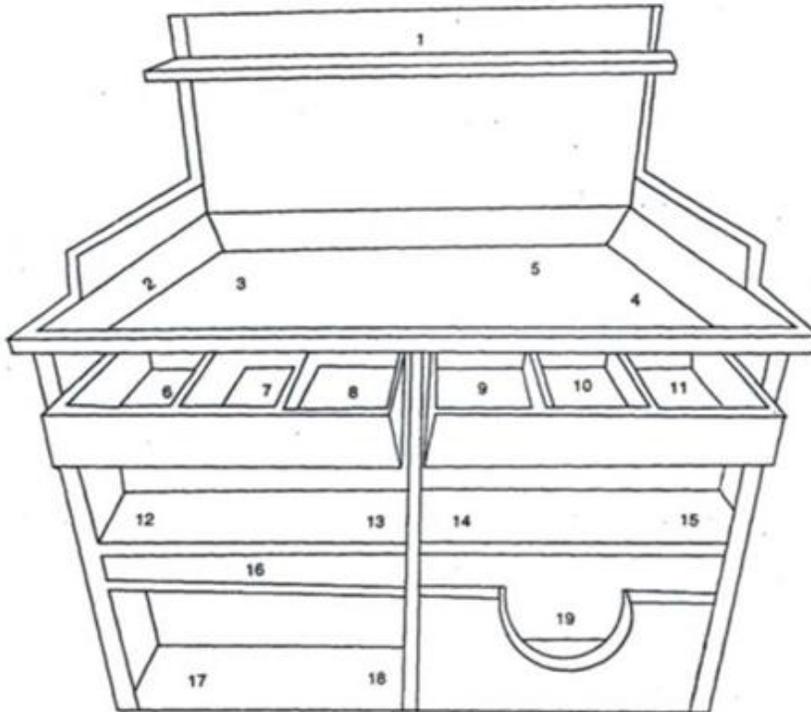
10.5.1 Setting-up the Sideboard

The sideboard (or dummy waiter) is a piece of furniture with shelves and cupboards spacious enough to stock linen, cutlery, crockery and other supplies required to service a set of tables in a station. Smooth service during the restaurant operation depends on how well the sideboard is prepared. The sideboard must be equipped with the following items:

1. Finger bowls
2. Folded napkins
3. Service cutlery
4. Cruet sets with salt and pepper
5. Cold water in water jugs with under plates and napkins to cover the mouth of the jugs.
6. Proprietary sauces such as Worcestershire, sauce, Tabasco or chilly sauce, tomato ketchup, JP/ HP sauces, Soya sauce, etc.
7. Toothpicks in toothpick holders.
8. Crockery - dinner plates, side plates, quarter plates, under plates, show plates etc.
9. Crumbing plate with brush
10. Restaurant linen - table cloths, napkins, waiter cloths etc.
11. Paper napkins and doily papers
12. Water goblets
13. Pots for jam, marmalade, mustard
14. Butter dishes with butter knives
15. Sugar bowls with white and brown sugar with teaspoons and straw

holders

16. Pots with pickles and chutneys
17. Bread boats with assorted breads
18. Ashtrays cleaned and polished (if the restaurant has a smoking policy)
19. Service spoons and forks
20. Cutlery for each cove-normally 2 1/2 times is the back- up stock
21. Salvers and trays with underlay for service



- | | | | |
|------------------|-----------------------------|----------------------|-------------------|
| 1. Sauce bottles | 6. Service spoons and forks | 11. Teaspoons | 16. Salvers |
| 2. Menu cards | 7. All purpose spoons | 12. Cups and saucers | 17. Bread baskets |
| 3. K.O.T books | 8. All purpose forks | 13. Quarter plates | 18. Fresh linen |
| 4. Water jug | 9. All purpose knives | 14. Glassware | 19. Dirty linen |
| 5. Ice buckets | 10. Soup spoons | 15. Ashtrays | |

Figure 7.1: Restaurant Side Board

10.5.2 Preparing the Trolleys for Service

Trolleys in a restaurant are an important part of merchandising food and beverage. They are display units that are meant to stimulate sales. A member of the restaurant brigade is given the responsibility for the preparation of trolleys. It is possible that someone is responsible for particular types of trolleys. For example, the sommelier will be responsible for the wine cart or the patisserie for the dessert trolley. Each has its distinct set of service ware which needs to be understood.

10.5.2.1 Wine Trolley

Wine service is important for its revenue potential. The wine trolley stocks and displays wines and spirits and is wheeled to the guest table to stimulate liquor sales. The trolley service is provided in gourmet restaurants and the person who provides this service is a qualified wine butler or sommelier. He would set the trolley with the following:

1. Wine List
2. Wine bottle corkscrew opener
3. Waiter cloths
4. Half plates to present corks of the wine bottles
5. Torch to show labels to guests in a dimly lit restaurant
6. Display of all table wines - Red, Rose, White, Sparkling
7. Champagne buckets
8. Wine boats to keep wine bottles On the table
9. Beverage glasses



10.5.2.2 Hors d'oeuvres Trolley

The hors d'oeuvres trolley is found in gourmet restaurants that presents the appetizers in an attractive manner. The trolley is wheeled beside the guest table at the start of the first Course. The tips for this trolley are:

1. Clean the trolley thoroughly first with a wet cloth (if it is not made of wood) and then a dry cloth. In the case of a wooden trolley use vinegar for cleaning.



2. See that the wheels of the trolley move freely and are well oiled. They must not squeak as the noise can be an ugly distraction to guests during service.
3. Set the hors d'oeuvre platters in an attractive way for easy identification by the guest. Platters are usually pre-set-up in the platters by the kitchen staff. The platters must be well polished and clean.
4. Keep a supply of service spoons, forks, napkins and underlines.
5. Keep a sufficient number of dessert plates to serve the guests.



Salad Trolley

10.5.2.3 Salad Trolley

Salads have become an important course nowadays because of an ever-increasing health-conscious public. This change in guest preferences has prompted many restaurants and bars dedicated to this public.

Most would like to mix and match their salads to their taste. They would also like to have options of sauces. Most now are looking for fat free sauces, so this has to be catered to.

1. The trolley must be cleaned as above.
2. Those who wish to mix and match their salads would like to see bowls of fresh green vegetables. Some suggestions are tomatoes, lettuce, Mushrooms, corn, cucumber, sprouts, spring onions, watercress, turnip, beetroot, radish, etc. The key is to ensure that the vegetables are crisp, crunchy and fresh always.
3. Similarly, the prepared salads like Caesar's Salad, Russian Salad, Egg Mayonnaise Salad, Mushroom Salad, etc. should be provided.
4. Meat salads are also to be provided like ham salad, tuna salad, chicken salad etc. The meats must be fresh and presented in attractive bowls of glass, china or silver.
5. Sauce boats provided must have an array of sauces to give guests a good choice. The boats will be in quarter plates with underliners and spoons for service. Some popular sauces are Italian Dressing, French Dressing, Salsa Sauce, Mayonnaise Sauce, Thousand Island Dressing, Horseradish Sauce, Mustard Sauce, lemon juice, etc.
6. An important service ware is a wooden mixing bowl for salads, 1 wooden fork and spoons.

10.5.2.4 Guerdon Trolley

The Guerdon trolley is found in gourmet restaurants to prepare foods beside the guest tables. Food is prepared with great fanfare and showmanship especially the flambé items. It should be equipped with the following items:

1. Proprietary sauces

2. White wine
3. Oil for cooking
4. Brandy
5. Red wine
6. Liqueurs for special crepe preparations
7. Pepper mill
8. Vinegar
9. Napkins
10. Service Spoons and forks
11. Matches and ashtrays
12. Flambe copper pans
13. French and English mustard
14. Wooden board for carving and cutting
15. Carving knife and fork
16. Butter
17. Salt and pepper
18. Sugar (grain and cube)
19. Filled gas cylinder



Figure 7.2: Gueridon Trolley

10.5.2.5 Cheese Trolley

Cheese in European countries is an important part of a meal in the classical tradition. Gourmet restaurants still offer this as a cutting edge in their service.

1. Clean the trolley as given above.
2. Requisition cheese from the kitchen and be fully conversant with the cheese.
3. Display cheese on a wooden bad with a cheese knife to cut the cheese.
4. Keep accompaniments such as brown bread, crackers, celery, olives and watercress.



10.5.2.6 Dessert Trolley

The dessert trolley is one that adds a dramatic end to a meal cycle. The presentation and offer of desserts is a sure revenue earner. The trolley must be prepared as follows:

1. Dessert plates
2. Paper napkins or folded serviettes



Dessert Trolley

3. Pastry forks
4. Gateaux Slice
5. Presentation platters with the dessert display most often prepared by the pastry and confectionary section of the kitchen
6. Assorted pastries
7. Assorted cake slices

10.5.2.7 Liqueur Trolley

A liqueur trolley is one that is an additional attraction in a gourmet restaurant that follows the classical menu preparations. The sommelier would be in charge of this trolley as well. The trolley will have the following items:

- Cordial glasses
- Brandy balloon glasses
- Cocktail glasses for frappe drinks
- Cursed ice
- Straws
- Peg measures
- Waiter cloths
- A choice of liqueurs-a good standard would be eight to ten liqueur
- Cordials
- Brandy

10.5.2.8 Fruit Trolley

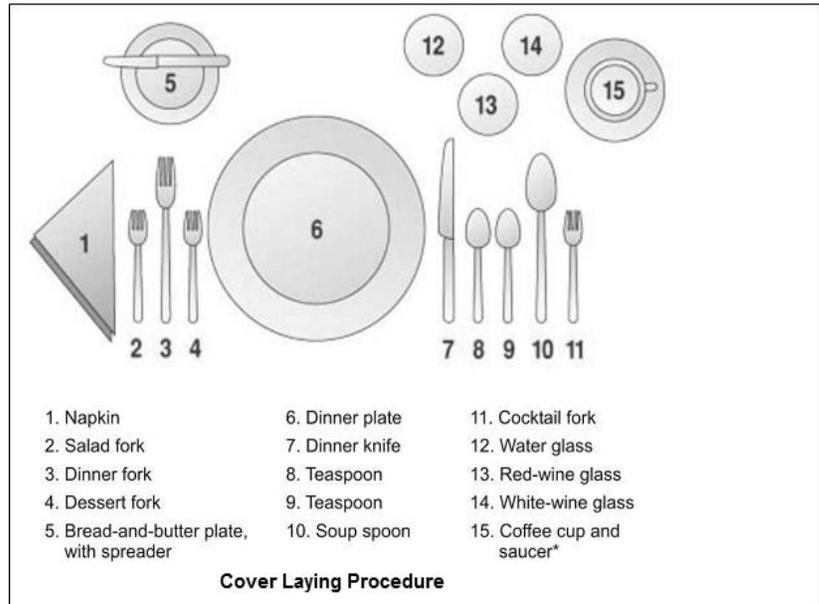
Guests may like to round off their meals with fresh fruits. This applies especially to diet-conscious guests who may opt to eat only salads and fruits. Restaurants recognize the health conscious and have a trolley for this niche public. The server will volunteer to cut the fruits into manageable portions and serve in the respective service ware. The trolley will have the following:

- Paring knives
- Half plates
- Fruit bowls
- Napkins
- Mixing bowls
- Castor sugar
- Teaspoons

10.5.3 Cover Set-up

A cover is the space on the table for the cutlery, crockery, glassware and linen for one person.

Each cover requires 24"x18" of space. Cover set-up is based on the type of service being offered by the restaurant. It is important for a server to check the standards required by the establishment. The basic principles of cover layouts are:



1. Each cover should be well balanced on the left and right of the guest's plate.
2. All cutlery and other table appointments should be placed at least 2" away from the edge of the table.
3. Knives and spoons must be placed to the right of the plate and all the forks on the left, except the butter knife which is on the side plate.
4. The cutting edge of all knives should be towards the plate except for the butter knife, which should face away from the plate.
5. The water goblet or tea-cup (for breakfast service) must be at the tip of the knife.
6. The butter knife should be at the top of the forks along with a dinner knife and on an under-plate.
7. The napkin should be placed in the centre of the cover or on the side plate.
8. Cruet sets must be placed on the top of the cover at the centre of the table.

CHECK YOUR PROGRESS- II

1) Write the short note on the Gueridon trolley?

.....

2) Write in short about the setting up the side board in the restaurant?

.....

10.6 Summary

The present unit throws light on the importance of briefing and de-briefing in a restaurant along with the points to be kept in the mind while doing this. The unit also highlights the meaning, role and the activities involved in Mis-en-scene and Mis-en-place of the restaurant. It also covers the preparation of sideboard, fruit trolley, salad trolley, gueridon trolley, liqueur trolley, dessert trolley, cheese trolley and wine trolley. The unit also covers the meaning of cover along with the basic principles to be followed while laying the restaurant covers.

10.10 Glossary

Briefing: two way communication between management and staff before an operation

Side Board: furniture central to an operation at a station

Mis-en-scene: preparation of the environment in a restaurant

Mis-en-place: preparation for an operation

Cover: The space on a table for crockery, cutlery and glassware for one person

10.11 Answers to Check Your Progress Exercise

CHECK YOUR PROGRESS - I

1. Read Sec. **10.3** and write about briefing & de briefing
2. Read Sec. **10.4.** to enlist chief activities undertaken during Mis-en-scene

Check Your Progress - II

1. Read Sec. **10.5.2.4** and write note on the Gueridon Trolley
2. Read Sec. **10.5.1** to write note on setting up the side board in the restaurant

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10.14 Terminal Questions

- 1- How do you prepare a salad trolley? Discuss.
- 2- What is stacked in the fruit trolley? Enlist.
- 3- How the restaurant cover is laid? Explain.

UNIT 11: ORGANIZATIONAL STRUCTURE OF FOOD AND BEVERAGE SERVICE

Structure

- 11.1 Introduction
- 11.2 Objectives
- 11.3 Origin & Development of F. & B. Service Industry
 - 11.3.1 Fast Food Restaurants
 - 11.3.2 Institutional Catering
- 11.4 Classification of Food & Beverage Industry
 - 11.4.1 Commercial Catering / Restaurant
 - 11.4.2 Institutional Catering
 - 11.4.3 Welfare Catering
- 11.5 Organisation Structure of F & B Department
- 11.6 Summary
- 11.7 Glossary
- 11.8 Answers to Check Your Progress Exercise
- 11.9 Reference / Bibliography
- 8.10 Suggested Readings
- 8.11 Terminal Questions

11.1 Introduction

In the previous unit you have gained knowledge about the Mise-en-Scene and Mise-en-Place of restaurant and other basic information about the food and beverage service department. The present unit aims to provide you in-depth knowledge about the organization of Food and beverage department along with its development.

The food service industry has two categories:

- (1) **Commercial establishments** which are committed to earn profit through the sale of food and beverages. The restaurant is king in this category.
- (2) **Institutional catering** that provides volume food and beverage service to institutions such as factories, business houses, schools, military, prisons, railways, airlines, etc. Many institutional programs are subsidized by the government.

To initiate a study on food and beverage operations it is important to know some of the essential terms and references so often used in any study material on food and beverage service. Here are some important terms frequently used.

1. Food and Beverage: As simple as it sounds. It refers to any service rendered to gratify basic human needs of hunger and the joy of eating and drinking for physiological and psychological satisfaction.

2. Hospitality (Service): The dictionary meaning for Hospitality reads -'The

friendly and generous reception of guest or stranger." So far the industry stands for is all aspects related to the above meaning i.e. skill, knowledge and attitude to fulfill the said goals.

3. Catering: one of the aspects of hospitality service is catering. It means professionally organizing the supply of food and beverage and managing social events.

4. Food and Beverage Department: Hotels have two branches of hospitality- The Accommodation operations/service and the other one is Food and Beverage Department. Further the food and beverage department has two broad segments:

(a) Food and Beverage Production

(b) Food and Beverage Service

The above two segments are so intermingled and interwoven that the study of one has to be supplemented and augmented with the other. Various subdivisions of food and beverage service department are:

1. Restaurants
2. Room Service
3. Banquet and offsite catering
4. Bar
5. Pastry Shop
6. Cafeteria

11.2 Objectives

After going through this Unit you will be able to:

- Apprehend the meaning, importance and role of F & B industry,
- Origin & Development of Food & Beverage sector through ages,
- Classification of the various types of F & B outlets,
- Type of foods and services offered in different F & B outlets, and
- Learn about the Organizational structured of F & B department.

11.3 Origin and Development of F & B Service Industry

Restaurants make up a huge part of the food service business and create extensive employment. Restaurants may be independent or part of hotel operations. An early type of restaurant was the Coffeehouse, which appeared in England in the mid-1600s. By the 18th century, there were approximately 3000 coffeehouses in London alone.

The term restaurant, as we know today, began in 1765 in Paris, France. There is an interesting story about the proprietor of, perhaps, the first public restaurant. Before 1765, inns and catering operations offered public food services. The caterers formed a guild (union) to protect their interests from unscrupulous competition. This is when a soup vendor created a soup made of sheep's foot and white wine sauce. He was brought to court by the guild for alleged competition. However, the court ruled that this specialty dish did not compete

with any dish prepared by the Guild and the vendor was allowed to continue. Because of the publicity, the vendor's soup kitchen became famous and even the king of France wanted to taste the specialty which created public commotion. The soup vendor merchandised the soup as "le restaurant divin"- the divine restorative, coming from the Latin word resturare, meaning 'to restore'. This gave us the word restaurant, which is a place to restore health.

The credit of the first restaurant in the US goes to Delmonicos, established in New York City in 1827. The Delmonico family operated nine restaurants until 1923. These restaurants were known for lavish banquets and extensive menus of 371 dishes. Then, as even now, the vast majority of American eating places offered simpler, less expensive food. The first big chain restaurant operator in the US was Fred Harvey. By 1912, his company operated a dozen large hotels, 65 railway restaurants and 60 dining cars. John R. Thompson was another early chain operator. By 1926, he controlled 126 self-service restaurants in the Midwest and the South.

11.3.1 Fast Food Restaurants

Fast-Food operations had a great impact on the food service industry. Fast food restaurants standardized ready-to-eat food and service. Fast food operations date back to at least the 1920s and 1930s when A&W Root Beer (the first fast food restaurant) and Howard Johnson franchised some of their units. They concentrated mostly on Hamburgers. Some leading fast-food chains in the world are given below. It is interesting to note that all of them are from the US, which establishes that they are the pioneers and leaders in this form of service.

A&W Restaurants	Hamburgers
Dominos' Pizza	Pizza
Pizza Hut	Pizzas and Pastas
Wendy's international Inc.	Hamburgers
McDonald's Corp.	Hamburgers
Burger King Corp.	Hamburgers
Subway	Subs

11.3.2 Institutional Catering

There are many institutional food service programs, but three are worth mentioning, as they were the original trailblazers of institutional catering.

11.3.2.1 Industrial Catering

A young mill-operator from Scotland by the name Robert Owen may be called the father of Industrial Catering. In 1815, appalled by the exploitation of workers in the British textile industry, he made it his mission to improve working conditions. One of his efforts was to provide an "eating room" for his workers and their families. This created a great motivation to his workforce who increased their productivity. Owen's methods were so successful that they spread throughout the world.

In the US, the textile industry, established in 1820, flourished along the Merrimack River in Massachusetts. The cotton mills provided boarding houses to feed the workers as an essential way of life. By 1890s, other business sectors adopted this 'practice of providing lunchrooms. In the US cafeteria service was introduced in 1902 by Plymouth Cordage Company Plymouth, Massachusetts, by building a special house with a kitchen, cafeteria and recreation facilities. A cafeteria has a counter offering pre-cooked meals, which consumers choose according to their budget, and eat by sitting in the free-seating areas in the cafeteria. Cafeteria service was found convenient especially when workforces had to consume their meals within limited lunch breaks. Establishments found that self-help was quicker and the prices were economical and flexible for their personal budgets. Today almost 75% establishments provide cafeteria services. New forms of industrial catering emerged during and after the World War II. Today we have gourmet lunchrooms to vending machines, on-site kitchen to outside catering contracts, food basket sales persons to franchised fast food operations within premises.

11.3.2.2 Hospitals

Hospitals were known in India and Egypt as early as 600 BC. In early Greece and Rome, the sick took refuge in temples that provided food for the patients and the poor. The first hospital in Europe was the Hotel Dieu in Paris built in 600 AD. The first hospital was established in England in 1004 AD. The Spanish explorer Hernando Cortes founded the first hospital on the American continent in 1524 in Mexico City. There is evidence though, that the Spanish Government of Hispania built the first hospital in 1503 in Santo Domingo, Dominican Republic. The first incorporated hospital in the US was the Pennsylvania Hospital, which received its charter by Benjamin Franklin in 1751.

Diet for therapeutic purposes became important only in 1800s. Florence Nightingale can be credited to be the first dietician and creator of the modern hospital. Food Preparation in the US was the responsibility of the cook. Only when nutrition was recognized for the purpose of health recovery, did hospitals look at specialists to prepare diet foods. In 1899, at the Home Economics Conference in Lake Placid, New York, the title of "Dietitian" was created. In 1917, the Dietetic Association was founded which led to dieticians as an important part of Institutional Catering programmes especially in the Armed Forces, prisons, schools and hospitals.

11.3.2.3 Schools

Though schools existed in early times, there is no record of school food programs. Rugby, Eton and Harrow evolved from religious institutions of the middle ages. They did not have any noted food service programs. At the university level, Oxford (Founded in the 12th century) and Cambridge (in the 13th century) provided lodging but not food. Students had to make do with the local community or with servants. American schools were patterned after English schools. By 1776, ten universities were established in the American Colonies.

Food service in the American colleges started in 1800 and spread informally across the US university structure. In 1935, the US Congress first made federal funds available to subsidize school food programs. Federal support continues till date. The accent is **On** nutrition for growing children. Today fast-food franchises have entered university premises in a big way. Many new innovations of Food Service have taken place. Today's hotels, restaurants and institutions cater to all the needs and wishes of the guest, worker or student and we hope that the future holds a promise for a further mushrooming of new concepts.

CHECK YOUR PROGRESS- I

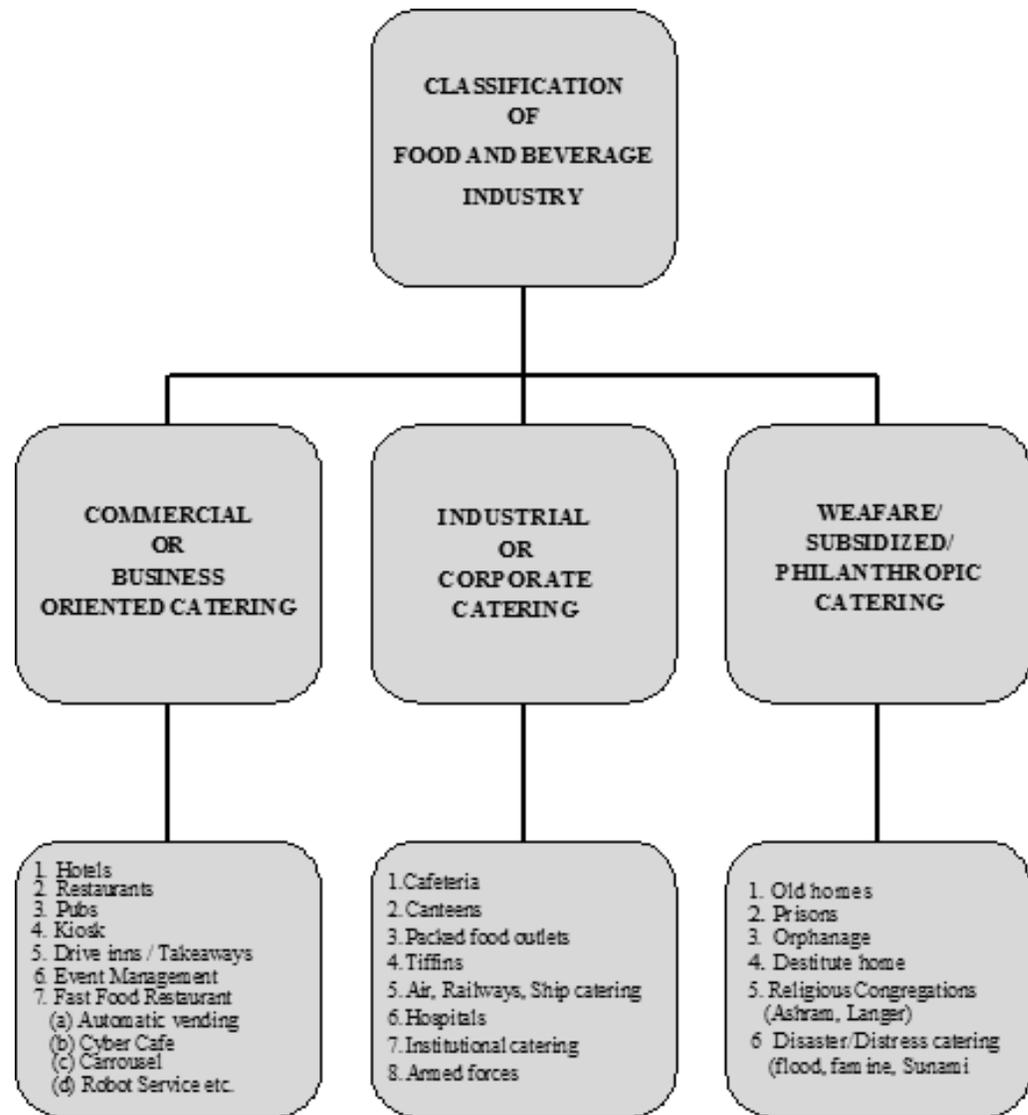
State whether the following statements are true or false

- a. Restaurants serve airlines. (T/F)
- b. Dieticians are an important part of institutional catering. (T/F)
- c. The term restaurant was first introduced in England. (T/F)
- d. Burger King Corp. specializes in hamburgers. (T/F)
- e. The father of industrial catering was Robert Owen. (T/F)

11.4 Classification of Food & Beverage Industry

There are many ways to classify food and beverage industry:

1. Commercial enterprises like restaurants and cafes that are committed to making profit.
2. Institutional catering that are operations that serve food in large quantities to institutions like schools, hospitals, pension homes, etc. Some are heavily subsidized by the government to benefit the communities they serve and operate on covering their costs.
3. Those that serve the public like theme park food services or fairground catering. They may be commercial or institutional operations that do not make distinctions as to whom they serve. An independent restaurant is willing to serve anyone who walks into the restaurant as long as the person is in a position to pay for the food and services. Similarly, government cafeterias may serve the public with subsidized meals. For example a government funded university campus could have a Food Court that serves enrolled students and faculty as well as visitors to the campus.
4. Those that serve restricted groups of people like passengers on a flight or members of a club. Here food is subsidiary to a greater activity.
5. A government body who may want to subsidize food programs is a prerequisite to their employees.
6. Private ownership that provides food strictly for commercial purposes. The **figure 11.1** at next page gives an idea of how complicated the classification can be. Let us examine some of the F & B units mentioned in the above table:



11.4.1 COMMERCIAL CATERING / RESTAURANT

A restaurant is a commercial establishment committed to the sale of food and beverage. Restaurants can be further categorized by ownership:

1. A restaurant may be a licensed part of a hotel operation, whereby the sales of the restaurant contributes to the sales performance of the hotel.
2. An independent business entity under individual ownership and management.
3. A chain restaurant that is part of a multi-unit organization, offering standardized menus, decor, type of service and marketing strategy. Basically, a restaurant provides tables and chairs for customers to eat meals prepared by an attached kitchen. The restaurants are equipped with crockery, cutlery, linen and decor which may vary in quality and concept in keeping with the objectives of that establishment. In addition to the basic purpose, restaurants

may provide the following facilities:

- Bar
- Entertainment
- Children party facilities
- Home delivery services
- Take-away services
- Outdoor catering

A restaurant professional will have to understand the types of restaurant that he or she is part of, in the first instance. The types of restaurants are:

11.4.1.1 Coffee Shop

A concept borrowed from the United States, distinguished by its quick service. Food is pre-plated from the kitchen. This is the main dining room of lodging properties in many countries including India. It is perhaps the largest restaurant also. Its multi-cuisine nature makes it to incorporate all popular international dishes which are simple and well known. In fact Indian hotels include majority of dishes of Indian origin with a clever mix of Italian, Chinese, Mexican, American and some British ideas. The food is nutritious, colourful and wholesome without being heavily garnished and complicated. It attracts people from all walks, i.e. hotel's guests, local pleasure diners, shoe string budget individuals as well as package deal guests. The menu changes four times in 24 hours, i.e. Breakfast, Lunch / Dinner, Evening tea, Snacks and a Wee hour card (Mid-Night snacks menu). It takes the maximum amount of breakfast load next to room service. Actually in most hotels, there is no other outlet where breakfast is offered. Coffee shop requires elaborate service and staff planning as it is open 24 hours 7 days a week and 365 days in a year. Therefore within this non-stop operation Manage i.e. opening and closing duties has to be done during operation. It is some kind of fire fighting operation in which in the presence of the guests all types of works are carried out in a tactical way. The service has to be prompt and food should be the main consideration for the guest as there is no entertainment or any other attraction. Since the table turnover or repeat guests on the same table is often so rapid that a large number of covers should be ready for replenishment. The cutlery and crockery inventory should be fairly high. The equipment used should be reasonably priced, as chances of breakage and pilferage are more.

11.4.1.2 Specialty Restaurants

In such restaurants, the entire atmosphere and decor is geared to a particular theme normally related to a regional cuisine. Chinese, Indian, Polynesian, Japanese and French restaurants are all geared to the speciality food they offer. An Indian restaurant, for example, would therefore, have Indian motifs on the walls, Indian artifacts, and costumes of the serving staff, piped Indian music, crockery, cutlery and glassware that give a total Indian experience. While the above mentioned cuisines have been popular and common, the world today has new options of speciality restaurants including Russian, Vietnamese, Burmese, Thai, etc. Speciality restaurants have gone further in giving the public ethnic foods within a region. So we have Bavarian food from Germany, Chettinad food from India, Cantonese food from China, Mongolian food from Russia, etc. The global world is allowing investors bring cuisines to an ever adventurous and

knowledgeable guest profile building restaurants around the cuisine.

11.4.1.3 Grill Room or Rotisserie

This is a restaurant that specializes itself in grills of different meats, fish and poultry. The distinguishing feature of this type of restaurant is a glass partition that separates the kitchen from the seating area so that guests can see the grill preparation of their choice. Grill rooms are casual and may have log tables and benches and the decor would be distinct American. The crockery may be coarse with hardy cutlery, paper napkins or checked cloth one. Some of them may be as casual as to have pool tables and indoor sports. Grill rooms can be sophisticated casual too with finer crockery and linen.

11.4.1.4 Dining Rooms

Dining Rooms are found in smaller hotels, motels, resorts, inns, clubs or heritage hotels. Smaller hotels may find it uneconomical to have more than one eating place. The dining room is usually meant for the residents of the hotel or members of a club who may bring their guests along. Dining rooms can change their atmosphere from the casual in the morning breakfast to formal for lunch and dinner. Dining rooms specialize in a good buffet spreads or a choice of two table d' hote menus.

11.4.1.5 Discotheque

It is a restaurant which is principally meant for dancing to recorded music. The music is driven by a qualified and experienced disc jockey (DJ) who creates or responds to the moods of the guests. Special lighting and a dance floor are essential to the discotheque. A feature of the discotheque is a bar which also offers light meals and finger picking snacks. Discotheques in hotels permit only formal casual clothing, while Independent ones allow casuals. Security is the main concern for a discotheque where both girls and boys mix and drink. Just as the bartender and the disc jockey are essential employees of a discotheque, so is the bouncer who guards the entry to the discotheque and ensures proper behavior. Discotheques do have an entry charge to ensure that the right crowds enter. Others may permit only couples to ensure the right balance of men and women. Some discotheques are strictly on membership basis.

11.4.1.6 Night Clubs

It is principally open at night for dinner, dance and live entertainment. The decor is lavish while service is elaborate with fine linen and silver crockery. Night Clubs permit formal wear only and some go to the extent of insisting black tie. An essential feature is live performances or cabarets which promote famous performers. A live band with a dance floor is a must. A variant to entertainment is the supper theatre where guests experience a play before or after dinner. A night club will have a bar with bartenders who are entertainers themselves. Some discotheques that also have a live band are also called night clubs nowadays.

11.4.1.7 Milk Bars

This is a collective name to cover informal snack bars, milk bars, kiosks, frozen

yoghurt stands, theatre counters, etc. A bar is a counter at which people eat food. Basically, these food bars have refrigerated or heated glass counters (based on the food they serve) displaying their wares. The public choose their items and go to a cashier who supplies them the items in paper plates or a take-away bag. They have limited seating places in the shop itself. The service is quick and often in the form of self-help. Many food bars may be specialty ones like the Subway that provides sub sandwiches; Dunkin Donuts that serves an assortment of doughnuts; New York Fries that specialize in French fries with various toppings and dips; London Dairy that specializes in ice creams; Cinnabon that specializes on cinnamon delicacies; laundro-bars situated at Laundromats; or food counters at supermarkets. Under this category are those eateries that reach the public when and where they need them most such as mobile food vans including the hotdog cart that serves meals at business centers, fairs and fetes.

11.4.1.8 Fast Food Restaurants

Fast food restaurants have practically taken over the modern dining experience. Fast food restaurants give ready-to-serve foods at reasonable rates. The guest pays cash and carries the food instantly. The restaurant is informal with wooden or plastic tables and chairs. Such restaurants can operate in limited space and have small kitchens to finish food that is semi-prepared elsewhere in central kitchens. The essential features are standard preparations, standard portion sizes, standard decor, friendly waiters cum cashiers and brightly coloured interiors. It is the Americans who have made this into a fine art and franchised their expertise all over the world.

11.4.2 INSTITUTIONAL CATERING

Institutional catering is a huge business that is marked with volume. While a lot has been written in this chapter as to the origins of institutional catering it would suffice to mention few Institutions that specially use this kind of service.

11.4.2.1 Industrial Catering

It refers to food programs in factories and corporate houses. The food is provided at staff canteens or cafeterias specially designated for the purpose of giving wholesome food to workers and executives. The cafeteria style is food presented at counters where a worker can choose the food according to his or her budget. A menu board displays food offered along with the prices. Hotels have huge food programs referred as 'free duty meals' given as a benefit to the hotel staff. Hotels would have dedicated staff kitchens preparing food to large in-house cafeterias. While cafeterias are for a large number of people, canteens are smaller usually serving few employees of the establishment. Executives may have exclusive dining rooms where the food is superior with formal service. This again is a perquisite given by many corporate houses. Many non-hotel establishments may offer subsidized meals as a perquisite. Some catering programs get complimented when food has to be provided to offshore establishments like oil-rigs.

11.4.2.2 Hospitals and Nursing Homes

These are major beneficiaries of institutional catering. The main focus of these food programs is to provide diet foods supervised by qualified dietitians, to patients, who are unable to actively seek alternative sources of food. These programs have chefs who are able to cook health foods of various requirements. Food comes to the hospital beds in pre - portioned trays. Hospitals also have large cafeterias on a paying basis for their staff and the visitors of patients. Hospitals may opt to run their own food service program or outsource this activity to qualified caterers.

11.4.2.3 School / College/ University

Catering is popular in full day school schedules and boarding schools. Food is nutritious and planned by dietitians who know the kind of food for growing children. **College/ University** foods are of two types. Residential hostels which build in meal costs in the total fees structure and those that permit licensed operators to open facilities to serve faculty, administrative staff and students. Today universities have their own food courts to offer students a choice of cuisines. These are in addition to hamburger stalls and mobile vans permitted to ply their trade within the campus.

11.4.2.4 Military Catering

It covers the entire armed forces and paramilitary forces. The Armed Forces cover the Army, Air Force and the Navy with their respective administrative wings. Paramilitary forces would include the Border Security Forces, Home Guards, etc. Food is provided in messes separately for soldiers, non-commissioned officers and officers. They need the same attention to quality, consistency and nutrition. While officers' messes may have formal silver service, the soldiers' messes have self-service counters. Messes also provide food for functions held at the mess. The real challenge comes when armies are on the move and need mobile catering service behind them to provide large quantities of food in changing locations.

11.4.2.5 Airline Catering

It may be classified into Flight Catering and Airport Catering. Flight Catering is a specialized food program for passengers on board planes. It has developed a long way from the sandwiches and flasks of coffee or tea to full dining service including drinks and wine and a choice of menus. Food is served in difficult conditions in narrow confines and especially when there is turbulence. The service trolleys and equipment have to be stable to manage flight conditions. The real challenge is to give complete, nutritious and tasty meals that can be kept warm on long hauls or foods that have to be serving quickly on short hauls. Food further varies with the class of travel. While economy class meals consist of standardized food served in plastic trays disposable plastic cutlery, and paper napkins, the First Class passengers get Guerdon service with a choice of menus, silverware, china crockery and linen. Flight kitchens are specialized and need to be geared to provide food to various airlines around the clock. They are required to prepare complete meals that are nutritious, and also those special meals for those with restrictive preferences like vegetarian food, non-fat meal etc. Airport

Catering involves food outlets that are self-service, waiter service, vending machines and licensed bars. They may be run by the airport authority or by outsourced catering establishments.

11.4.2.6 Ship Catering

Ship Catering is almost like catering in a hotel. The challenge in cruise liner is the ability of stocking and storing the right quantity of provisions and raw materials between ports to ensure that food is available to passengers during their voyage. The standard of catering is high as it is part of the sales package. Cruise liners have full silver service with waiters and gourmet meals.

11.4.2.7 Railway Catering

Railway Catering is a large and challenging food program. They may be classified into railway terminal catering and in-transit service. Catering at terminals consist of a range of facilities including takeaway foods, fast food restaurants, waiter service restaurants, vending machines, self-service cafeterias, kiosks and mobile food trolleys where the food comes to the train window. In-transit service can vary from fresh foods provided to passengers at their seat by carefully planning supply points en-route. This needs precise communication to catering companies within the railway network to respond appropriately. The railway catering has to take into account the different eating habits and tastes of a large travelling public. They have to further cater to vegetarians and non-vegetarians. Then, there are the dining cars where passengers can sit and eat in the car ordering a la carte meals. Then there are the trolleys that move along seating aisles and provide limited choices of snack food to passengers at their seat. Railway catering is pre-portioned food served hot at a station stop or by food warmers in dining cars.

CHECK YOUR PROGRESS- II

Fill in the blanks:

1. Catering places in factories are called.....
2. A type of eating place that has refrigerated or heated counters is a.....
3. Night clubs are
4. Speciality restaurant serve.....food.
5. Railway catering may be classified into in-transit service and.....

11.4.3 WELFARE CATERING

Welfare catering may be defined as those operations in which the profitability of the catering facility is not the primary concern. Since the operations are either completely or partially subsidized by a parent organization, such establishment's primary obligation is the well being and care of their customers.

11.4.3.1 Prison Catering

It is very challenging to feed nutritious and wholesome food to inmates and to avoid the spread of disease in a limited prison campus. Prisons have their own catering which are supervised for hygiene and sanitation. Prisons do take care of those inmates who need special dietary food. Food service is on a self-service basis at food service counters.

11.4.3.2 Religious Catering

Recent successful management of kumbh mela was an eye-opener for the world how such a massive number of pilgrims could successfully be taken care of for a stretch of full one month. In fact the number of people who visited the mela were above 30 million. The sheer number that poses the biggest stumbling block, actually the government agencies were involved in providing the cereals, pulses, spices and other non-perishable materials from the state godowns. The vegetables and other perishable items were brought from far and near as the local supplies had been only insufficient for such a massive programme. The religious congregations and feeding is becoming more and more popular. We see in Vaishno Devi, Amarnath, Sikh Guru Purav meals are provided in huge numbers from make-shift kitchens. In some places it is a matter of all the meals 365 days a year like T-series langar at Vaishno Devi and Pondicherry Ashram. The cooking involves unusually large pots and pans specially designed with compatible cooking range. The kind of cooking involves rare experience and managerial skill from fund procurement to materials management (purchasing, receiving, storing and issuing).

11.4.3.3 Mass Feeding Programmes

These are rather an organizational activity of the Government department looking after social welfare, rehabilitation etc. or NGOs as Salvation Army on perpetual basis. The number may vary from 500 to 5 million people, for example, small organizations offer biscuits and milk to the school children of a slum cluster to a massive 'Bal Ahar Yojna' in which 5 million children were covered for meal at their schools in rural areas for families below poverty line so that they are motivated to send their children to schools. The enormous planning required is something which makes the Government fail almost every time. Although some organizations are carrying on the task successfully in Ethiopia, Zaire, Kosavo, East Timor etc. It requires procurement at cheapest level and networking to decentralize the distribution and production to reliable NGOs.

CHECK YOUR PROGRESS- III

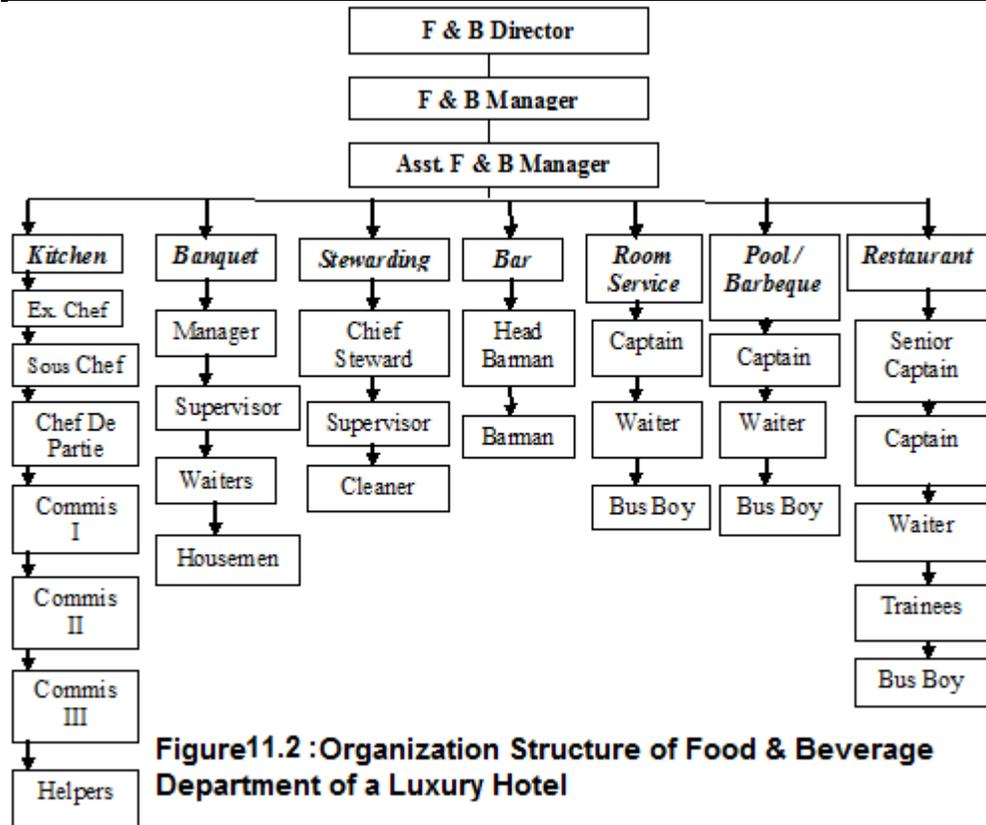
Match the following:

- | | |
|---------------------|---------------------------------|
| 1. Outdoor Catering | a. diet foods |
| 2. Clubs | b. stable equipments |
| 3. Railway Catering | c. supply points |
| 4. Ship Catering | d. marquees and tents |
| 5. Airline catering | e. right quantity of provisions |

11.5 Organization Structure Of F & B Department

Organizing, the process of structuring human and physical resources in order to accomplish organizational objectives, involves dividing tasks into jobs, specifying the appropriate department for each job, determining the optimum number of jobs in each department, and delegating authority within and among departments. One of the most critical challenges facing hospitality managers today is the development of a responsive organizational structure that is committed to quality. The framework of jobs and departments that make up any organization must be directed toward achieving the organization's objectives. In other words, the structure of a hospitality business must be consistent with its strategy. Managers give structure to a hotel through job specialization, organization, and establishment of patterns of authority and span of control.

The primary function of the food and beverage department is to provide food and drink to a hotel's guests. In earlier times, when an inn had a single dining room that could hold a limited number of guests, this was a fairly simple task. Today, however, providing food and drink is much more complicated. A large hotel might well have a coffee shop, a gourmet restaurant, a poolside snack bar, room service, two banquet halls, and ten function rooms where food and beverages are served. It might also have a lounge, a nightclub, and a lobby bar. On a busy day (or night), it's quite likely that functions will be booked in many outlets at the same time. In addition, some outlets may have multiple events scheduled for a single day. As you can see, there is great diversity in the types of activities performed by a food and beverage department, requiring a significant variety of skills on the part of its workers.



The success of a food and beverage (F & B) service operation depends in the way it is organized to achieve its goals. An organization structure is a framework that establishes the relationship between job positions as well as establishes the channel of communication. Such structures are explained graphically in an organization chart. Most of the establishments follow traditional hierarchical organization structures that have evolved over the ages comprising Top level Management, Middle level Management, Junior Level Management, Supervisors and operating Staff. The human resources in the food & beverages department of a luxury five star category hospitality unit may be classified as presented in above **figure 11.2**.

Because of the diversity of services provided, the food and beverage department is typically split into subunits. The executive chef, a person of considerable importance and authority in any full-service hotel, runs the food production, or kitchen, department. A variety of culinary specialists who are responsible for different aspects of food preparation report to the executive chef.

The actual serving of food in a large hotel's restaurants is usually the responsibility of a separate department, headed by the assistant food and beverage director. The food service department is composed of the individual restaurant and outlet managers, maitre d's, waiters, waitresses, and bus help.

Because of their special duties and concerns, many large hotels have a separate subunit that is responsible only for room service. Because of the high value and

profit margins associated with the sale of alcoholic beverages, some hotels have a separate department that assumes responsibility for all outlets where alcoholic beverages are sold. The person responsible for this department is the beverage manager.

Most full-service hotels also do a considerable convention and catering business. The typical convention uses small function rooms for meetings and larger rooms for general sessions, trade shows, exhibits, and banquets. As a hotel or lodging business increases the use of its facilities for conventions and meetings, it may form a separate convention services department. The convention services department and its personnel are introduced to the client, a meeting planner, or an association executive by the marketing and sales department. The convention services department then handles all of the client's meeting and catering requirements. Individually catered events include parties, wedding receptions, business meetings, and other functions held by groups. To provide for the unique needs of these types of customers, hotels often organize separate catering and convention departments. Therefore, the challenge faced by management is the diversity of the employees in the food and beverage department; the dishwasher in the stewarding department is at a radically different level than the sous chef in the kitchen.

11.6 Summary

The present unit will enable to understand the stages of origin & development of food & beverage industry in the present form. The unit also gave you the information about the different forms of catering operations found in the hospitality business such as restaurants, coffee shops, hospital catering, religious catering, cafeteria etc. Besides, the unit also provides the idea about the organization structure of the food and beverage department of a luxury hospitality unit to understand the human resources associated with the f & b trade in better way.

11.7 Glossary

- **Organization Structure:** a framework of relationships in an organization
- **Commercial Catering:** A catering arrangement committed to earn profit
- **Institutional Catering:** Volume food service in institutions
- **Pre- Plated Service:** service where food is pre- portioned into platters in the kitchen
- **Welfare Catering:** catering operations in which the profitability of the catering facility is not the primary concern

11.8 Answers to Check Your Progress Exercise

CHECK YOUR PROGRESS - I

State whether true or false

1. F
2. T
3. F
4. T
5. T

CHECK YOUR PROGRESS - II

Fill in the blanks:

1. Cafeteria
2. Delmonicos
3. Formal
4. Ethnic
5. Railway terminal catering

CHECK YOUR PROGRESS - III

Match the following:

1. d
2. f
3. c
4. e
5. b
6. a

11.9 Reference / Bibliography

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11.10 Suggested Readings

1. Modern Restaurant Service – John Fuller, Hutchinson, London
2. Beverage Management – Michael Coltman
3. Table and Bar – Jeffrey Clarke
4. Dixit S.K. (ed): Promises & Perils in Hospitality & Tourism Management, Aman Publications, New Delhi, 2005.

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5. Lillicrap Dennis, Cousins John & Smith Robert: Food & Beverage Services; Hodder & Stoughton Educational.
 6. Essential Table Service for Restaurants – John Fuller
 7. The Waiter Handbook, Graham Brown, Global books & Subscription Services, New Delhi

11.11 Terminal Questions

1. Describe the organizational structure of a food & Beverage department of a luxury five star hotel?
2. Describe with suitable example the welfare catering?
3. Write a detailed essay on the origin & development of F & B industry through ages?

UNIT 12: BEVERAGE CLASSIFICATION, BAR AND ITS TYPES

Structure:

- 12.0 Introduction
- 12.1 Objectives
- 12.2 Classification of Beverage
- 12.3 Non-Alcoholic Beverages
- 12.4 Alcoholic Beverages
- 12.5 Introduction To Bar
- 12.6 Bar Equipments and Tools
- 12.7 Bar Planning and Design
- 12.8 Summary
- 12.9 Key Words
- 12.10 Check Your Progress
- 12.11 Bibliography

12.0 Introduction

You may know that the word “Beverage” has its origins in the Latin word “Bever” which literally means “Rest from work”. When one does physically strenuous work, one tends to perspire, thereby reducing the level of water in one’s body. Therefore, when one is taking a break from exhausting work, one feels the need to drink some liquid to quench one’s thirst. In this unit you will know about the meaning of Beverage, kinds of beverage, classification of beverage, alcoholic and non alcoholic beverage. You will also learn how to set up a bar, planning and putting various bar equipments in order for a speedy service. After reading the unit you will understand the kinds of beverages in the world and their classification. You will also have adequate knowledge about the non alcoholic, alcoholic beverages and in case you want to set up a bar either in the house or the hotel you have the basic idea which can be improvised as per need and budget.

12.1 Objectives

After reading this unit the student will :

- Have knowledge about uses of beverages.
- Have knowledge about type of beverages.
- Have knowledge about types of non alcoholic beverage and alcoholic beverages
- Have knowledge about various types of Bar.
- Have knowledge about various bar equipments.
- Have knowledge about principles of bar design.

Definition of Beverage

A Beverage is any potable (consumable by humans) liquid which refreshes, stimulates or nourishes the human body. Most beverages fulfill two or all of the

above three objectives. A beverage may be plain or flavored, hot or cold, flat or sparkling, alcoholic or non-alcoholic.

The 3 Objectives of a Beverage :

1. **To Refresh:** - This is the primary reason why all living beings need water, in some form or the other. Water forms 70% of the human body and is the medium of all body functions. The nervous system needs water to convey electro-chemical signals between the brain and various parts of the body; lungs need water to absorb oxygen from the air; blood needs water to transport oxygen and nutrients to all parts of the body. However, when one does physically strenuous work, one perspires, thereby losing water and reducing the level of body's fluids below the minimum required for the body to function efficiently. The body sends signals to the brain which we interpret as thirst, or the feeling of need to drink some beverage. Thus, the primary objective of beverages is to replenish the level of water in the body, that is, to refresh the body.
2. **To Stimulate:** - "To stimulate" means to encourage the increment or the growth or the acceleration of a process. Most of us feel the need for a stimulating cup of tea or coffee when we wake up in the morning. When one goes to sleep at night, all the body functions like heart-beat, breathing, digestion, blood circulation, etc. Our body functions slow down also when we are tired, but to a lesser degree compared to sleeping. To bring them back to their normal rate (that is, to stimulate), we require energy. Solid foods can also provide energy, but our digestive system processes liquids faster than solids. Therefore, we prefer tea, coffee, hot chocolate, etc. when we wake up from sleep. Apart from energy in the form of sugar, stimulating drinks like tea, coffee, cola drinks, etc. also have caffeine, which makes the adrenal gland in our body secrete the hormone Adrenaline into our blood. Adrenaline makes our heart beat faster, increasing blood circulation, and consequently, speeding up all the other body functions. As a result, one feels more alert and energized, more "stimulated".
3. **To Nourish:** - When one sweats due to exertion, one's body doesn't lose only water. It also loses vital nutrients like mineral salts, vitamins, proteins, etc. that are essential to keep the body in good working condition. Beverages like fresh fruit juices, mineral water and fruit drinks (lemonade, ginger ale) contain various nutrients, and consuming these beverages nourishes the body by augmenting the essential nutrients to their required levels.

12.2 Classification of Beverages

Beverages are classified as either Alcoholic Beverages or Non-alcoholic Beverages.

Alcoholic Beverages:

1. Wines
2. Spirits

3. Liqueurs
4. Beers
5. Cocktails
6. Aperitifs

Any beverage containing at least 0.5% of alcohol is classified as an Alcoholic Beverage. Alcohol is a family of Hydroxide of Organic Radicals. All the alcohols except Ethyl Alcohol (scientific name – Ethanol, chemical formula – C₂H₅OH) are highly toxic (poisonous) for humans.

Global excise laws require that any beverage containing between 0.5% and 76% alcohol should be considered as a commercial alcoholic drink. Any beverage containing more than 76% alcohol comes under the category of medicinal drinks.

Non-alcoholic:

1. Hot-Tea, coffee, cocoa, etc.
2. Cold-Dispense beverages
3. Aerated water
4. Mineral water and spicy water
5. Squashes
6. Juices
7. Syrups

Just as the name suggests, Non-Alcoholic Beverages contain no or less than 0.5% alcohol. They are potable drinks which have one, two or all of the 3 qualities of being refreshing, stimulating and nourishing. Non-Alcoholic Beverages may be either HOT or COLD.

Cold non-alcoholic beverages can be further Germany), Vichy Celestine (France) and Badoit (France) are examples of beverages which naturally contain carbon dioxide gas. Coca Cola, Fanta, 7up, Limca, Tonic Water, Ginger Ale, etc. are beverages which are artificially charged with carbon dioxide gas.

Hot non-alcoholic beverages, the prime examples of which are Tea, Coffee and Hot Chocolate, are consumed primarily as stimulating beverages around the world. Though most of the hot non-alcoholic beverages have substantial levels of nutrients, their consumption for nutritional or refreshment purposes is very limited. Categorized as either Aerated or Still (Non-Aerated).

Still Drinks are plain liquids which may be flavoured or unflavoured. Mineral water, fruit & vegetable juices, squashes, cordials, crushes, slushes, shakes, smoothies, syrups, nectars, ethnic drinks like lassi, nimbu-paani, aam-panna, coconut water, jaljeera, etc., all come under the of Still or Non-Aerated Beverages.

Aerated Beverages, also called Sparkling Beverages, are the drinks which contain Carbon Dioxide, either occurring naturally or added artificially. Spring waters or Mineral waters like Appolianaris.

12.3 Non Alcoholic Beverages

Stimulating Beverages: some of the stimulating beverages such as tea, coffee etc. are discussed as under:

12.3.1 Tea

Definition of Tea: Tea is a non-alcoholic beverage obtained by processing the leaves of *Camellia Sinensis* or *Camellia Assamica*, which are tropical plants of the *Camellia* family. The processed tea leaves are infused with steaming hot water to release the rich aroma and flavour of tea and then combined with cream, sugar, lime juice or a huge array of other herbs, flavours and mixers. Tea is the second most popular non-alcoholic beverage in the world after coffee. It is the most commonly consumed drink in India, China, Japan, Korea, Sri Lanka, West Asia, Great Britain and France.



TYPES OF TEA

Black Tea: This is the most commonly available and the most widely consumed variety of processed tea in the world. Black tea is produced when the production method described above is followed without variations. As the name suggests, it is black in colour and is characterized by strong aroma and flavour. A variation of the Black Tea is the CTC (Cut, Tear and Curl) Leaf Tea. This variation is produced when, during the Rolling stage, the rolling cylinder in the crushing machine has grooves and spikes on its rolling surface. When the leaves pass under the cylinder, they not only get rolled but also get cut, torn and curled. The CTC Leaf Tea leaves have a pellet-like appearance and are browner in colour compared to Black Tea. Though having lesser flavour than Black Tea, CTC Leaf Tea produces stronger liquor.

Oolong Tea: - The Oolong Tea is very popular in its country of origin, China. It is produced by reducing the time of the Withering and Fermentation processes by half. The liquor of the Oolong Tea is golden-amber in colour and, even though it isn't very strong, it gives off a highly refreshing aroma and contains a fine, delicate flavour.

Green Tea: - Green Tea is produced by steaming the leaves immediately after plucking. The stages of Rolling, Withering and Fermentation are completely eliminated. After steaming, the leaves are dried, rolled and packaged for sale. Green Tea leaves, when infused with hot water, turn it a light golden in colour and give off a delicate, enticing aroma. Green Tea is gaining popularity all over the world due to its high content of vitamins and minerals as well as its antioxidant properties. In India, Green Tea is grown in the Kangra valley and in Dehradun and is used to make the popular Kashmiri Kahwa.

Black Tea is graded into 4 major categories according to leaf or particle size:

- Leaf Tea
- Broken or Small Leaf Tea
- Fannings
- Dust

Other Popular Teas:

1. **Herbal Tea:** - Herbal Teas do not contain any tea leaves. They are made from the flowers, berries, peels, seeds and roots of many different plants like Camellia, Camomile, Rosemary, Mint, Lemon Grass, Ginseng, Yarrow and Rose. Herbal teas have gained great popularity among health-conscious people due to their zero caffeine content.
2. **Instant Tea:** - An infusion of regular tea is freeze-dried and placed in air-tight containers. Instant tea is used in Automatic Vending Machines.
3. **Yerba De Mate:** - It comes from Paraguay and Brazil and contains no tea. It is produced from the leaves and small stems of a species of plant native to the above-mentioned countries. The leaves and small stems of this plant are processed exactly like tea.
4. **Scented Tea:** - They are simply teas which have been scented with extracts of flowers, herbs and peels of plants like Jasmine, Rose, Orange Zest, Lemon, Cinnamon, Earl Grey, etc.

Golden Rules for Making Tea:

1. Use a good quality tea.
2. Use fresh water, which is freshly boiled. The water should be lime free. Tap water makes tea cloudy.
3. Heat the tea pot, i.e., rinse out the teapot with boiling water before putting in the tea. One teaspoon of tea per person + one for the pot (depending upon the quality of the tea).
4. Pour the water onto the tea just as it reaches boiling point, taking the pot to the kettle, as the water must be as near boiling point as possible to enable the leaves to infuse properly. Water should be 95°C (just below boiling point), before it is poured over the tea leaves.
5. Infusion becomes bitter if boiled longer.
6. Brew the tea, never stew it. Allow the tea to brew only for 4-5



minutes, and stir well before pouring.

7. Just before serving, stir the tea in the teapot with a spoon. Use a strainer.

12.3.2 Coffee

Definition of Coffee : Coffee is a hot non-alcoholic beverage which contains a strong stimulant called CAFFEINE. It is made by infusing the crushed processed beans of the “Coffea” plant with hot water. Many different mixers, herbs, sweeteners, juices, etc. are added to the coffee liquor according to the consumers’ tastes to make the bitter coffee more palatable. Coffee is the most popular beverage, particularly as an after-dinner drink, in the world.

THE “COFFEA” FAMILY

Coffea Arabica: Arabica is the best quality, and consequently the most expensive, variety of coffee. Its beans are uniform in shape, regular in size and impart excellent aroma and flavour. The Arabica plant, however, is quite vulnerable to climate change, pests and diseases. It is grown predominantly in West Asia, India, Brazil, Colombia, Costa Rica, Kenya and Jamaica.

Coffea Canefora (Robusta Coffee):

As the name suggests, this is a very robust variety, highly resistant to pests, diseases and climatic variations. It was grown mostly in the equatorial parts of Africa till a decade ago, but has now taken over most parts of the coffee cultivating world from the Arabica plant. Though slightly behind Arabica in terms of aroma and flavour, Robusta gives much higher yield and also produces stronger liquor.



Coffea Liberica: Liberica coffee beans are large in size but lack quality, aroma and flavour. Liberica is grown in Malaysia and Guyana, but not on a large enough scale, and its consumption is also limited to these regions only. Arabica and Canefora (Robusta) are the only commercially important varieties of coffee in the world market. Liberica, being low in quality, does not have any commercially viable demand.

Method/type of Coffee

Filter / Dip
Jug
Turkish
Cafetiere
Vacuum Infusion
Espresso
Percolator

Grinding Grade

Fine to Medium
Coarse
Medium
Medium
Medium Fine to Fine
Very Fine
Medium



Rules to Observe while making Coffee:

1. Use freshly roasted and ground coffee.
2. Buy the correct grind for the right type of machine
3. Clean the equipment
4. Use a set measure.
5. Add boiling water to the coffee.
6. Infusion time is according to the type of coffee being used and the method of making
7. Control the temperature. Do not boil it.
8. Strain; serve.
9. Add/milk/cream separately.
10. Serving temperature – Coffee – 82°C, Milk – 68°C

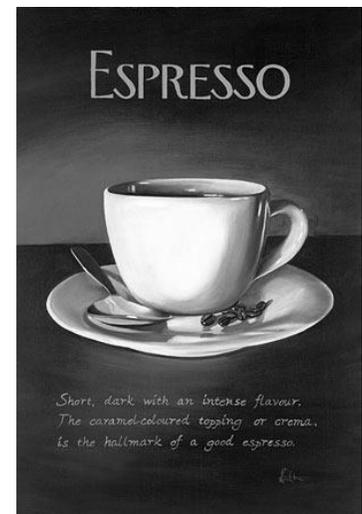
Characteristics of Good Coffee:

1. Good flavour
2. Good aroma
3. Good aroma of milk/cream
4. Goody body

Cocoa and Chocolate:

The Cocoa plant is a small tropical tree which was originally grown in South America. Nowadays, the Accra region in Ghana (West Africa) is the single largest producer and exporter of Cocoa, accounting for approximately 70% of the global output. Brazil, with 24%, is the second largest producer. The cocoa plant needs fertile soil, low altitude, hot and humid climate and high rainfall to grow. The fruit of the cocoa plant, called the "Cocoa Pod", is about 4-12 inches in length and about 4 inches in diameter. It has a yellowish leathery rind covering the pulp, which contains 25-75 seeds per pod. The cocoa and cocoa butter are contained within the seeds.

Cocoa Butter : Cocoa butter is used to make imitation chocolates which are of inferior quality compared to genuine chocolate, and consequently, cheaper. The most common use of cocoa butter, however, is in the manufacture of cosmetics.



12.3.3 Nourishing Beverages

1. **Bourn vita:** Mixture of malt, sugar, glucose, cocoa powder, dried milk, dried egg, salt and flavouring. Blended together; cooked under a vacuum until brittle. Carefully broken up.
2. **Horlicks:** Malted milk made from wheat flour, malted barley and milk.
3. **Oval tine:** Made from barley, malt milk, cocoa powder, soya flour, eggs and vitamins.
4. **Milo:** Made from condensed milk and malt extract with cocoa power, milk products and added vitamins.

Other Patent Beverages:

1. Boost
2. Complan
3. Mistura – real almond, chocolate, rich protein mixture.

12.3.4 Hot Milk

It is a soothing beverage. It is served in a teacup with a sugar basin or sometimes in a highball glass.

12.3.5 Refreshing Beverages

Iced Tea: Make strong tea. Chill well. The iced tea may be strained and stored chilled until required. This may be then served in a glass, on a doily, with a teaspoon on a side plate.

Garnish: A slice of lemon and sprig of mint.

Alternate method: Place crushed ice in a tall glass. Bring cool black tea in a teapot. From the right, pour it over the ice.

Cold Coffee: Strong coffee (black) should be made in the normal way. Strained and chilled well until required. It is served with an equal quantity of chilled milk for a smooth beverage or with cream in a tall glass with ice cubes added and with straws. The glass should stand on a doily on a side-plate with a teaspoon and wherever necessary, some cream should be served separately. It could be topped with ice cream.

Milk Drinks:

1. **Plain cold milk** – It is refreshing and nourishing. Generally served in a tall glass with an underliner and doily in between and a sundae spoon. Sugar syrup is given separately. A straw is also provided.
2. **Milk shakes** – A mixture of fresh milk, ice cream and flavouring syrup, rapidly whisked. May be topped with ice cream.

3. **Ice cream sodas** – A combination of fruit syrup and fresh cream in a long glass filled with soda water and topped with ice cream.
4. **Egg nog** – These are beaten eggs with fruit syrup and sugar added, mixed with hot/cold, and garnished with nutmeg powder.
5. **Iced chocolate** – Make a hot chocolate with melted chocolate, castor sugar and milk. Cook it, whisking it all the time. Allow it to cool completely. Put it in a blender with crushed ice.
6. **Flavoured milk** – In tetra packs.

12.3.6 Mocktails

A non alcoholic beverage containing all properties of a cocktail except alcohol. Some famous mocktails are given below :

1. **Virgin Mary** – Tomato juice with salt, pepper, worcester sauce. May be garnished with a wedge of lemon. Served in a salt rimmed old-fashioned glass.
2. **Non-alcoholic Pina Colada** – Pineapple juice and coconut cream, shaken well and strained. Served in a Collins glass. Garnished with pineapple. Served with a straw.
3. **Shirley Temple/Roy Rogers** – A mixture of ginger and grenadine. Served on the rocks with a full fruit garnish and straws.
4. **Tropicana** – Pineapple juice + orange juice.
5. **Pussyfoot** – Orange juice, lemon juice, lime cordial, grenadine, egg yolk and soda, shaken well. Served on ice in a Collins glass and topped with soda.

12.3.7 Squashes and Cordials

These are all concentrated fruit extracts, meant to be broken down with fresh or aerated water into a long drink and may be served hot or cold.

A fruit squash is made from fruit juice, sugar and preservative. Fruit cordial is a fruit squash from which all suspended matter is completely eliminated and is perfectly clear. It is filtered and clarified using fining agents. It is preserved by adding Potassium Meta-bi-sulphide and Sodium Benzoate or pasteurized by freezing.

Fruit Syrups : These are concentrated fruit juices preserved with sugar or manufactured from compound colourings and flavours, eg. orange, lime, cherry, etc. Grenadine syrup is made from pomegranate.

Use : Base for cocktails, fruit ups or mixed with soda to give a long drink.

FRUIT JUICES

1. **Fresh Juices:**

The unfermented juice of fresh fruits e.g. Apples, grapes, pineapples.

2. **Preserved :** Used in bars

- Canned
- Bottled
- Tetra Packs



It is served in 8 oz glasses on a doily-covered underliner. Since they already have high sugar content, there is not need to give sugar syrup separately. Provide a straw with it.

12.3.9 Waters

Soft Drinks: Drinks are acidified, sweetened, coloured artificially, carbonated and often chemically preserved. The formulation and flavouring of many well-known brands are a guarded secret. The water used should be well-purified, and free from micro-organisms, dissolved metals and organic compounds.

Synthetic flavours are generally used because:

- Natural flavours added to the drinks do not give standard products.
- Natural flavour extracts undergo changes in the presence of light, acid and storage.
- Natural flavours do not transport pigments of sufficient depth.
- Natural flavours are unstable in acidic conditions. Acids used are Citric, Malic, Tartaric and Phosphoric. Dissolved carbon dioxide also produces acidity.

Sodium Benzoate is a common preservative used in soft drinks.

Tonic – It is an aerated drink, sweetened and flavoured with natural fruit and plant extracts including quinine. It is drunk straight with ice and a slice of lemon or added in a cocktail. It is generally used with gin.

Gingerale – Consists of aerated water with colouring and ginger essence.

Lemonade – Consists of lemon juice, sugar and aerated water.

Bottled Water: It is of two types:

1. **Mineral** – This has a mineral content, which is strictly controlled.

2. **Spring Water** – This has fewer regulations apart from those concerning hygiene.

Waters can be classified as:

1. Still
2. Naturally sparkling
3. Carbonated during bottling.

The capacities of the bottles vary from 1.5 litre to 220 ml. Glass and plastic bottles are available.

Natural Spring Waters: This is obtained from natural spring water in the ground. The water itself is impregnated with the natural minerals found in the soil. It is sometimes charged with an aerating gas. The uniqueness of this mineral water is that they have medicinal value. Where natural spring waters are found, it is usually termed as 'Spa'. Here the water may be drunk or bathed in, according to the cures they are supposed to effect. Many of the best-known mineral waters are bottled at the springs.

Mineral Waters: According to their chemical properties, they are classified as :

1. **Alkaline Waters** – Help treatment of gout and rheumatism.
2. **Aperient Waters** – Have saline constituents like sulphate of magnesia or sulphates of soda.
3. **Chalybeate Waters** – Mineral waters are of two kinds : carbonated or sulphated. They act as a stimulant and as a tonic.
4. **Lithiated Water** – Rich in lithia salts.
5. **Sulphurous waters** – These are impregnated with hydrogen.
6. **Table Waters** – These are less mineralised than other natural spring waters and are mainly alkaline. They may be taken between meals or at meal time, either alone or mixed with light wine or spirits.

Brand Names of Mineral Waters :

French	:	Badoit, Contrex, Evia, Perrier, Vichy Saint
England	:	Ashbourne, Abey Well, Ashe Park, Malvern, Aqua Pura
Ireland	:	Bally Gowan, Glenpatrick
Italy	:	San Pellegrino, Ferrarelle, Crodo Lisiel
Germany	:	Apollinaris, Uberkinger, Petrusquelle
Belgium	:	Spa
Switzerland	:	Aqui
Sweden	:	Ramlosa
India	:	Himalaya, Pondicherry

12.4 Alcoholic Beverages

Alcohol: Alcohol is a liquid obtained by the fermentation any sugar containing liquid. Ethyl alcohol is the principal alcohol found in all alcoholic beverages. An alcoholic beverage is defined as any potable liquid having a minimum of 0.5% of ethyl alcohol by volume.

Methods of Obtaining Alcoholic Beverages:

- 1) **Fermentation:** Sugar of fruit/grain is converted to alcohol by the action of bacteria/yeast. The concentration can be controlled by the length of fermentation.
- 2) **Distillation:** The fermented fruit or grain mash is heated. The alcohol evaporates at a lower half than that of water and it is condensed, collected and concentrated as per requirement.

Different Alcoholic Beverages:

- 1) **Wine:** It is an alcoholic beverage obtained by fermentation of freshly gathered grapes.
- 2) **Spirit:** This is potable alcoholic beverages obtained by distillation of a liquid containing alcohol. Some of the spirits are :
 - a) **Whiskey:** It is derived from the Gaelic term, 'using beatha', meaning, water of life, and is a distillation of fermented mash of grain (maize, barley, corn, rice, etc.) or a combo. It is matured or aged in wooden casks.
 - b) **Brandy:** 'Brandewijn' in Dutch means 'burnt wine' and it is obtained from the mash of grapes. Brandies can be obtained from other fruits like peach, apple, etc.
 - c) **Gin:** It is derived from a French word, 'Geneivre', which means juniper berries and it is the prime flavouring agent in gin. The base is a neutral spirit made from grain with other flavourings like coriander, orange and lemon peels added to it.
 - d) **Rum:** It is obtained from 'Saccharum', a main constituent of sugarcane and was originally made in West Indian plantations.
 - e) **Vodka:** The term 'Voda' means water. This is a fermented mash of grain/vegetables (potatoes). Re-distillation removes all odour, taste and colours. It is diluted to required strength.
 - f)
 - g) **Tequila:** It is obtained from a large pineapple-type plant of the lily family – mistaken usually for a type of cactus – found in abundance in South West Mexico.
- 3) **Beer:** This is an alcoholic beverage made from the fermentation of several grains flavoured with hops and the by-product of carbon dioxide is retained in the bottling. The method of making beer is known as brewing.
- 4) **Sake:** It is an oriental brewed beverage made from rice.

Type of Alcoholic Beverages: Alcoholic beverages are named differently due to the use of different base raw materials, the methods of production and flavourings achieved either by natural means or additives. The following are different types of alcoholic beverages.

1. Fermented: In this type, raw materials used are mostly fruits containing high amounts of naturally occurring sugar, which can easily be converted by the action of yeast to alcohol and carbon dioxide.

Base Material

Grapes (wine)

Applies

Pears

Honey

Agave or maguey

(A type of prickly plant of the lily family)

Fermented Products

Table wines (red, white and rose), sparkling (with carbonation), fortified (with added alcohol), aromatized (with added alcohol and flavouring), vins doux naturels (naturally occurring sweet wines)

Cider

Perry

Mead

Pulque

2. Brewed: It is a process similar to fermentation. But since the base materials is a carbohydrate, it has to be broken down to simpler sugars and yeast has to be added to it before the fermentation an occur.

Base

Grain

Rice

Brewed Products

Lager, ale, stout and porter

Sake (An oriental brewed product from Japan and China)

3. Distilled: This process of separating water from alcohol is achieved by heating the mixture obtained by fermenting of brewing and then condensing the alcohol vapours.

From

Grapes (wine)

Grain (beer)

Sugarcane (Molasses)

Dated, palm sap

Agave (pulque)

Distilled Products

Cognac, armagnac and other brandies

Whisky, vodka and kornbranntwein (brandy from corn)

Rum – light, dark, full-bodied

Arrack

Tequila

4. Fruit Brandies: They are also distilled beverages from fruit-based products. Some of them are:

From

Applies

Plums

Cherries

Pears

Strawberries

Distilled Products

Calvados

Slivovitx, mirabelle, quetsch

Kirsch, cherry brandy

Eau-de-vie de poire

Eau-de-vie de fraise

5. Compounded Flavoured Spirits: These are distilled beverages with the addition of flavouring agents (flowers, roots, barks, leaves, seeds) added either during the distillation process or later.

From

Grain, molasses

Distilled Products

Gin

Grain, potatoes	Aquavit
Grapes	Pastis-Pernod, Ricard, Ouzo
Aromatic fruits	Bitter
Fruit, grapes, grain	Liqueurs

12.5 Introduction to Bar

Bar is defined as a retail outlet for drinks which are generally consumed standing up or sitting on a bar stool in front of a counter fitted with a wooden bar as a rest and hence the name. The back bar is a set of shelves of glasses and bottles behind the counter. It may be decorated with wood work, etched glass mirror and lights.



Alcoholic and non-alcoholic drinks are sold for consumption within the premises. The term 'bar' applies to the counter itself. Bars originated in 1910 and developed between the world wars with the fashion of cocktails. Type of bars range from Dive (informal) bars to elegant places of entertainment.

12.6 Types of Bar

A bar's owners and managers choose the bar's name, décor, drink menu, lighting, and other elements which they think will attract a certain kind of patron. However, they have only limited influence over who patronizes their establishment. Thus, a bar originally intended for one demographic profile can become popular with another. For example, a gay bar with a dance floor might, over time, attract an increasingly straight clientele. Or a blues bar may become a biker bar if most its patrons are bikers. There are following types of bars discussed as under:

1. **Bistro** – These are small bars or restaurants. The name is said to have been derived from



the Russian word, 'Bistro' which means 'quick'. The word may have come into origin by the quick service given to Cossacks during the Russian occupation of Paris in 1815. The most likely origin is an abbreviation of the word 'Bistrocile'. Modern Bistros are of modest appearance and offer local dishes, cold meat, cheese and wine.

2. **Public House** – These are also referred to as Public bars or pubs. These are large in size and offer drinks and light meal at a reasonable rate.
3. **Saloon/Lounge/Private Bar** – These bars offer varying degree of comfort, elegance and privacy. They are small in size and have restricted entry. These bars are expensive and cater to the elite class.



4. **Dispense Bar** – This is a bar situated within a Food & Beverage service area that dispenses only wine and other alcoholic drinks for consumption with meal or are sometimes dispensed from bars situated in the food and beverage service area. The alcoholic drinks are served by a member of restaurant staff known as Sommelier or Wine waiter.
5. **Service Bar** – This is a bar where drinks are poured and made ready to serve in some other area like room service, lounge etc by the waiter. It does not have a display counter and is usually situated at the back of the house.
6. **Cocktail Bar** – These are modern bars situated in luxury hotels. They are lavishly equipped and furnished. They introduce new concepts in style and service of exquisite drinks.
7. **Poolside Bar** - These are the bars situated near the pool area. Alcoholic and non-alcoholic drinks are provided to the guest frequenting the pool area. The entry to these bars may be restricted for residential guests and members only.
8. **Wine Bar** – An elegant bar that serves only wine. The guests are allowed to taste the wine before placing the order. The style and service is elegant.

12.7 Bar Equipments

Some of the bar equipments are discussed as under:

Glassware: Different types of glassware are used in the service of alcoholic beverages. They contribute to the appearance of the table and enhance the overall appearance of the bar. Traditional glasses came in different sizes and shapes but now, for the convenience of the caterer and the manufacturer, the glasses are made in standard sizes. The capacity of a glass is measured in Fl oz or ml. Except for certain specialty restaurants or deluxe hotels which may use cut or coloured glassware, hotel glassware is usually plain and clear. It should have a stem for holding the wine glass so the heat of the hand does not affect the quality of the wine. The glass should be slightly curved inwards so as to hold the aroma and should be large enough to hold the wine being tasted.

Choosing Glassware:

- The glassware should be consistent in quality with other tableware.
- There should be no visible joints.
- The glassware should have a comfortable hold.
- The glasses which have a multipurpose use should be preferred.

Cleaning, Care and Storage of Glassware:

- Ideally, glassware should be hand washed with detergent although dishwashers capable of washing glasses are available in the market.
- They should be thoroughly dried and then stored in a glass pantry in single rows on paper lined shelves or mats, upside down to prevent the dust settling on them.
- Tumblers should not be stacked inside one another to prevent breakage and accidents.
- Glasses should be polished with glass polishing cloth only before being placed on shelves.
- Care should be taken that all edible items are removed from the glasses before being placed in the glass washer.
- Broken or chipped glass should be discarded immediately.

Types of glasses used in the Bar:

- Red / White Wine Glass



- Sherry glass



- Port / Madeira glass



- Liqueur glass



- Hock / Moselle glass



- Brandy Balloon



- Champagne Tulip / Flute



- Champagne Saucer



- Cocktail glass



- Beer mug / tankard



- Water tumbler
- Old fashioned glass



- Decanter



- Tequila shots



- Beer goblet



12.8 BAR EQUIPMENTS AND TOOLS

A number of electrical and manual equipments are required to carry out work smoothly in the bar, for service of wine, spirits, preparation of cocktails and mocktails. Some important bar equipments are listed below:-

Electrical :

- Refrigerator
- Ice making machine
- Glass chiller
- Beer cooler
- Glass washer
- Electronic spirit dispenser
- Beer taps
- Wine chiller
- Ice crusher
- Blender
- Ice Box

Manual :

- Cocktail shaker
- Boston shaker
- Mixing glass
- Hawthorn Strainer
- Bar spoon
- Ice bucket
- Wine salver
- Peg Measure
- Straws
- Cocktail sticks
- Swizzle sticks
- Water jug
- Tongs
- Cock screw
- Wings screw
- T-shaped wooden screw
- Vegetable knife and chopping board
- Champagne bottle stopper
- Muslin and funnel
- Muddler
- Soda Siphon
- Fruit squeezer
- Sink unit

12.9 Bar Planning and Design

A bar is an important revenue generation facility of a hotel property. Clients, be they of any class, frequent bars for unwinding and cherishing their drinks. Bar designing, thus, has to be sensitive to their moods and preferences, while at the same time ensuring maximum returns on investment to the organization at minimal possible costs. The following factors need to be considered while planning and designing a good bar.

- Budget
- Area
- Clientele
- Points of service
- Shape and size of bar counter
- Guest preferences
- Seat turnover
- Average spending power
- Timings
- Location and site
- Décor, ambience, and colours
- Style of service

Location: The bar should be located at such a location that it is easily visible and accessible to the customers so as to achieve maximum sale. In a hotel, bars are mostly situated near the lobby and are usually visible from it.

Space: There should be sufficient space for the staff to work behind the counter, too much space will result in tiring of the staff and too less space will make the place crowded and difficult to work. Ideally, there should be a minimum of 3 feet of space from the back of the counter to the storage shelves at the back.

Bar Counter : The bar counter may be round, oval or straight but round or oval bar counter looks more attractive than a straight bar counter. The counter should be a minimum of 1½ feet wide. The height of the counter varies from 4–4½ feet. Bar stools placed in the front of the counter should be 3 feet high with foot rest approximately a foot from the floor. It is always advisable to have a back rest and to fix the bar stool to prevent accidents or guests toppling over.

Under Counter: The under counter should be 30 inches high. The width should be 18 inches with the fitted sink and draining board installed at one side of the counter. There should be enough space for the placing of various equipments and glassware required at the bar. There should be shelves on either side of the counter with mirrors at the back side for storage of wine, spirits and glassware.

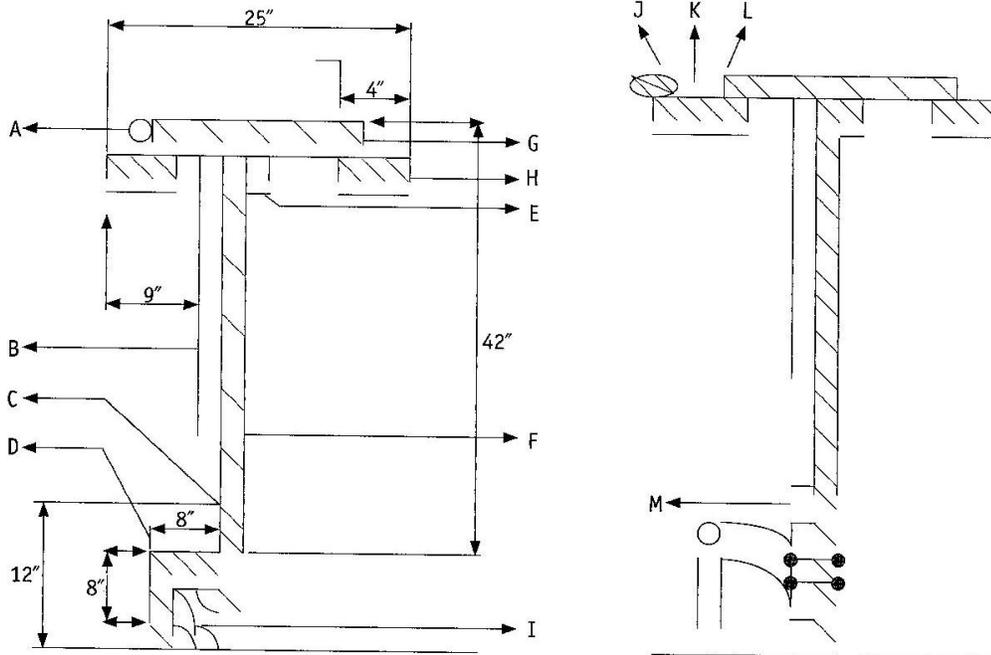
Plumbing and Electricity: It is important to have regular supply of hot and cold running water for washing of glassware and other work. Modern bars are equipped with a number of electric machines therefore; sufficient power points with proper earthing should be available.

Flooring: The work area should be such which is non slippery and easy to wipe or mop. The guest area may be wooden or carpeted as these surfaces are able to absorb sound.

Lighting: The bar should have a light and pleasant atmosphere. Too much lighting is not preferred but should be enough so that the guests can see each other. Indirect lighting is preferred to direct lighting. There should be sufficient lighting at the bar counter for the barman to carry out his work efficiently.

Furniture: Bar is usually a place where guests meet each other for close interaction and spend plenty of time conversing with each other. Most of the bars serve drinks along with light meals with the guest moving to the restaurant for lunch or dinner. It is therefore advisable that the seating is comfortable. Sofa or soft seating arrangements are preferred with low height for guests to place their drinks and snacks.

A layout/design for a combination of public and service bar as well as the placement of equipment in it.



Cross Section Diagram of a Bar Counter

Standard Bar Details :

- A- Arm rest – typical wood shape shown-many styles available including finishes.
- B- Decorative finish – wood panel, tongue and groove board, carpet, upholstery, ceramic tile, etc.
- C- Kick plate – linoleum, formica, etc.
- D- Food rest – linoleum, slate, hard wood etc.
- E- Cleat-for securing top to die, varies by manufacturer.
- F- Bar Die – usually $\frac{3}{4}$ " plywood.
- G- Liquor gutter – usually constricted as shown, May be formed in one piece mahogany bar top.
- H- Water stop – $\frac{1}{4}$ " thick black formica or wood. Cut down for cleaning at ends.
- I- Shoe – To prevent moisture from separating laminations of the plywood die, a solid wood base strip or metal channel shoe is desirable.
- J- Extended arm rest – wood, Formica or upholstery.
- K- Extension bar – brass or black iron
- L- Water stop – same as "I".
- M- Brass foot rest – rail usually 2" diameter. Swing away support to floor optional. Check thickness of brass rail proposed by supplier. They are rather expensive.

Suggestions or Useful Tips while Planning and Designing a Bar:

- 1) When planning large island type bars, consider the slow periods when only one bartender is on duty. Divide the islands into sections leaving walk through space.
- 2) If your preference is for serpentine, round ends or curved bars, weigh carefully the aesthetic value against the much higher construction costs

and remember the under bar sinks and coolers. To place a long bottle box, or draft beer unit under a curved bar, not having an exceptionally large radius, could make it impossible for the bar tender to reach far enough to be able to serve a customer sitting in front of the under bar unit.

- 3) A fat expenditure on the bar front should be incurred only if it is an absolute necessary and in keeping with the theme. People seldom pay a lot of attention to it.
- 4) Inexpensive paneling or applying carpet to the bar front are usually quite satisfactory.
- 5) Masonry brick fronts provide an attractive rustic appearance.

Dining and unwinding at a bar can be a pleasant and memorable experience if the ambience is tastefully created. A good design is one that is subtle and unobtrusive while at the same time imbuing a degree of affluence and exclusivity.

12.10 Summary

After reading this unit the students should be able to understand the objectives of beverages and their various roles in the human life. As seen from this unit beverage have been classified into two main categories (1) alcoholic (2) non-alcoholic. Both alcoholic and non-alcoholic beverages are beneficial to the man kind if consumed in the right quantity and tend to be harmful to the human body if excess amount is consumed. This is more profound in alcoholic beverages than non-alcoholic beverages.

The second part of the unit deals with bar planning and design. After reading this unit the student should be able to distinguish among different kinds of non-alcoholic joints popularly known as Bars. They will be aware of different bar equipments and their use. The student will understand the main features required in planning of a bar. A diagram of a bar counter has been given so that the students will have a basic idea of how a bar should be designed.

12.9 Key Words

- **Alcoholic Beverage** : Beverages containing minimum 0.5 alcohol. They include sprits, wines, beer and other drinks.
- **Beverage**: Common name for all type of potable/consumable liquids served on their own or with meals.
- **Bistro**: Small bars or restaurants having modest appearance and offering local dishes, cold meat, cheese and wine.
- **Brewing**: A process similar to fermentation, induced by addition of yeast.
- **Caffeine**: Strong stimulant found in coffee.
- **Coffee Arabica**: This is the best and most expensive variety of coffee grown in India, Brazil, Colombia, Costa Rica, Kenya, Jamaica.
- **Dispense Bar**: A bar situated within the F & B service area that dispenses alcoholic drinks for consumption with meal.

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4. What are the golden rules of tea/coffee making.
Ans. in 12.3

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5. Name and explain different types of Bar.
Ans. in 12.5

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6. What are the main principles involved in designing in bar?
Ans. in 12.7

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12.11 Bibliography

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12.12 Terminal Questions

1. Define beverage. Classify beverages into different groups and give their uses.
2. Name 5 methods of coffee making. What are the principles involved in making a good cup of coffee?
3. What are Mocktail? Name and give the recipe of any 3 Mocktails.
4. Short note :
 1. Characteristics of Coffee
 2. Black coffee
 3. Coffee Arabica
5. State the use of water in human life. Name and describe ten types of water available to the guest in a hotel.
6. Define bar. Discuss the various types in detail.
7. Name five types of glasses used in a bar. Draw neat sketch of any five along with capacity.
8. Name ten electrical and manual bar equipments used in a standard bar. Give their use.
9. What are the principles involved in planning and designing a bar.
10. Short notes :
 1. Stimulating beverage
 2. Characteristics of coffee
 3. Pub

UNIT 13: INTRODUCTION TO SPIRITS

Structure

- 13.0 Introduction
- 13.1 Objectives
- 13.2 Meaning and definition of Alcoholic beverage
- 13.3 Measuring Of Alcoholic Strength
- 13.4 Whiskey
- 13.5 Brandy
- 13.6 Gin
- 13.7 Rum
- 13.8 Vodka
- 13.9 Tequila
- 13.10 Summary
- 13.11 Key Words
- 13.12 Check Your Progress
- 13.13 Bibliography

13.0 Introduction

In the earlier units you have studied about beverages, different kinds of beverages, mixing of drinks, making of alcoholic (cocktails) and non alcoholic (mocktails) drinks, tobacco etc. Spirit is a potable alcoholic beverage obtained from the distillation of an alcoholic containing liquid. A spirit is a distillate of fermented liquor. The most common base ingredients of potable spirits are fruits, cereals, molasses and vegetables. Distillation concentrates the strength and flavour of the liquor by removing most of the water. The main kinds of spirits are – Whiskey, Rum, Gin, Brandy and Vodka. In this unit you will read about these spirits – Whisky, Rum, Gin, Tequila, Brandy and Vodka. You will read about the making of the spirits, their main ingredients, composition, ways to drink and serve and their use in different cocktails. After reading this unit you will know the details of making different spirits, and you will have knowledge about its basic nature so that you can use it in making new drinks or new cocktails. In making new and innovative cocktails one must know about the aroma, flavour and colour of the ingredients to be mixed and should think of the consequences of mixing the drinks like – what will be the final colour, the smell, aroma, flavour of the mixed drink? So when making drinks and serving in the house or hotels you will be very comfortable and have full of knowledge as you know what you are serving, drinking or making.

13.1 Objectives

After reading the unit the students will :

- Have knowledge about sprits, the process of making sprits.
- Have knowledge about how distillation is carried out in different ways.
- Have knowledge about ways of measuring alcoholic strength.
- Have basic knowledge about sprits like Whiskey, Gin, Brandy, Rum, Vodka and Tequila.

13.2 Meaning and Definition of Alcohol

Any potable beverage containing a minimum of 27% of ethyl alcohol (scientific name– Ethanol, chemical formula – C_2H_5OH) can be classified as a Distilled Alcoholic Beverage or a Spirit. Alcohols are hydroxides of organic radicals.

The simplest alcohol is called Methyl Alcohol (Scientific name - Methanol, Chemical Formula – CH_3OH) whereas the most complex ones which are chemically stable are Octyl Alcohol (Octanol, $C_8H_{17}OH$), Nonyl Alcohol (Nonanol, $C_9H_{19}OH$) and Decyl Alcohol (Decanol, $C_{10}H_{21}OH$), which are used as propulsion fuel in rockets and missiles. All alcohols, with the exception of Ethyl Alcohol, are highly toxic for humans.

The art of distilling was known centuries ago to Chinese who used it to manufacture perfume and to Arabians who used it to make potable alcohol. The first mention of distillation is attributed to an Arabian Alchemist, Albukassen of the tenth century. In thirteenth century, chemist and philosopher, Ramon Lall, described the process of distillation. It was introduced into the Europe in the twelfth century. Spirit was introduced to the eastern world by the Mongols. The necessity of discovery of distillation may have been felt so as to preserve wine which was perishable commodity and was destroyed during transportation. Distillation helped in preserving the shelf life of the wine and introducing mankind to a new product. It was the Arabs who introduced this art to the west. The alcohol itself is of Arabic origin.

These spirits may be of two styles:-

1. **Flavoured Spirits** – Spirits which have their own intrinsic flavour example brandy, which has multiple flavours due to ageing.
2. **Neutral Spirits** – These have no flavour of their own and flavour is added to the spirit during the time of production. Example-gin.

DISTILLATION

Distillation is a scientific process which can be described as “The volatilization of a liquid by heating in a retort or still and then condensing the resultant vapour back to liquid form by cooling”. Literally, distillation means “To Purify” and/or “To Concentrate”. In the case of spirits, or distilled alcoholic beverages, distillation serves both these objectives. A fermented liquid contains dissolved impurities which remain even after filtration. These impurities can be removed only by subjecting the liquid to two or more cycles of distillation.

Also, since alcohol is a natural antibiotic, it kills all micro-organisms, including the bacteria (yeast) which convert sugar into alcohol. A fermented beverage cannot contain more than 10% alcohol because even the most resilient bacteria cannot survive in a solution containing as little as 10% alcohols. Therefore, to increase the alcohol content of a fermented beverage, one resorts to the process of distillation.

THE PRINCIPLE ON WHICH DISTILLATION WORKS

Distillation is based upon the simple principle that no two liquids have the same Boiling Point (The temperature at which a liquid changes into vapour or gaseous form). A fermented liquid contains alcohol and impurities dissolved in water. In this solution, alcohol has the lowest boiling point of $78^{\circ}C$ (Celsius), which means

that it is the first to evaporate when the ambient temperature of the solution starts rising. The dissolved impurities, most of which are organic esters and acids, evaporate between 85°C and 90°C, whereas water has the highest boiling point of 100°C. The filtered fermented liquid is put in a still and heated. As the temperature rises, the alcohol vapourizes first. The vapours are passed through a condenser which has cold water circulating around copper pipes. As vapours of alcohol pass through these copper pipes, they cool down and condense back into liquid form. They are collected in another container as purified and concentrated alcohol. There are two distinctive methods of distillation used to produce distilled Alcoholic Beverages.

1. POT STILL (TRADITIONAL STILL, ALEMBIC STILL)

The Pot Still has been used since time immemorial for distillation of spirits. It consists of a large vessel, conical at the top and rounded at the bottom. The rounded bottom rests on the concave top of a kiln. The heating vessel, vapour pipe, condensation unit and all the other parts of the Pot Still which the alcohol comes in contact with are made of copper. The fermented liquid is poured into the vessel, which is then sealed. A fire is then lit in the kiln. As the temperature of the liquid in the still rises, the alcohol component of the solution vapourizes. The vapour pipe conveys the alcohol vapours to the condenser, which comprises of an insulated cabinet with continuously circulating cold water through which run copper pipes connected to the vapour pipe. When the alcohol vapours enter pipes in the condenser, their temperature is reduced and they condense back into liquid form. The Pot Still is used for producing spirits which have strongly defined aroma and flavour, such as fine whiskies, brandies, etc.

2. PATENT STILL (COFFEY STILL, CONTINUOUS STILL, COLUMN STILL)

It was not until the late 1820s that a new form of still was invented by Robert Stien, which produced spirit in a continuous stream as long as wine, beer or some such mildly alcoholic wash was fed into it. First going into commercial production in Cameron bridge distillery in Fife, Scotland. A Dublin Excise officer, Aeneas Coffey, attended a demonstration of the new still, took the idea and developed it further, and it was Coffey's version of the continuous still that eventually caught on worldwide. This new still was called the 'Continuous Still' (also 'Column', or 'Patent', or 'Coffey Still'). In simple terms, consists of two columns, one of which has steam rising and wash descending through successive storeys inside (referred to as the 'Rectifier'). The steam stripped out the alcohol from the wash and carried over to the second column (referred to as the 'Analyzer') where it circulates until it can condense at the required strength. The benefits of the continuous still are a cheaper and purer spirit.

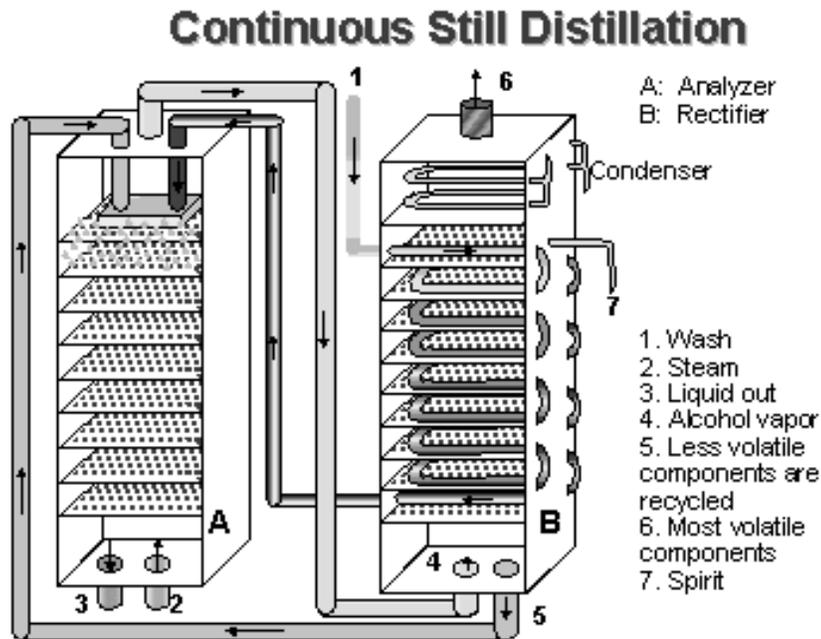
STILL DISTILLATION

Has two main parts, a 'Rectifier' and an 'Analyzer', which both resemble tall, wide tubes. They are both filled with steam. The liquid being distilled enters a pipe travelling down the rectifier, and is heated almost to boiling point. The alcohol from the primary liquid vaporizes and is channelled along with the steam back to the base of the Rectifier. Here it mixes with more steam around the pipes, bring with it more liquid to be distilled, hence a 'Continuous Still'. Roughly two-thirds up the Analyser, the vapour hits a cold plate condensing it into a liquid. This is channelled out as a distilled product. Today, alternatives open to distillers are to

use the labour intensive pot still which carries the fragrances and flavours of the raw material, or the faster, cheaper continuous still with its potential for high strength, pure but tasteless spirit.

How does it work :

Steam is fed into the base of the analyser and hot wash into the top. As the two meet on the surface of the perforated plates, the wash boils and a mixture of alcohol



vapours and uncondensed steam rises to the top of the column. The spent wash runs down and is led off from the base. The hot vapours enter the rectifier at the base and as they rise through the chambers they partially condense on the sections of a long coil through which wash is flowing. The spirit vapour condenses at the top of the rectifier and is run off through a water-cooled condenser to the spirit safe and on to the spirit receiver. Once the spirit begins to be collected it runs continuously until the end of distillation.

SIMPLIFIED PATENT STILL

A **column still**, also called a **continuous still**, **patent still** or **Coffey still**, is a variety of still consisting of two columns invented in 1826 by Robert Stein, a Clackmannanshire distiller, and it was first used at the Cameron Bridge Grain Distillery in Fife, Scotland. The design was enhanced and patented in 1831 by an Irishman, Aeneas Coffey. The first column (called the *analyser*) has steam rising and wash descending through several levels. The second column (called the *rectifier*) carries the alcohol from the wash where it circulates until it can condense at the required strength.

Column stills behave like a series of single pot stills, formed in a long vertical tube. The tube is filled with either porous packing or bubble plates. The rising vapour, which is low in alcohol, starts to condense in the cooler, higher level of the column. The temperature of each successively higher stage is slightly lower than the previous stage, so the vapour in equilibrium with the liquid at each stage is progressively more enriched with alcohol. Whereas a single pot still charged

with wine might yield a vapour enriched to 40-50% alcohol, a column still can achieve a vapour alcohol content of 96%; an azeotropic mixture of alcohol and water. Further enrichment is only possible by absorbing the remaining water using other means, such as hydrophilic chemicals or azeotropic distillation.

13.3 Measuring Of Alcoholic Strength

During the Middle Ages, measuring of alcoholic strength of spirit was important to calculate the price of the spirit. This was difficult due to the absence of appropriate

hydrometers and spectrum

analyzers. The

stronger the

spirit, the more

was its price. To

check the

alcoholic

strength of the

spirit, a chemical

test was

designed in

which gun

powder and spirit

in equal amount

were mixed and

ignited. If the

mixture burnt

rapidly in blue

flames, it was

called proved

spirit (proof

spirit). If it did not

burn or burnt

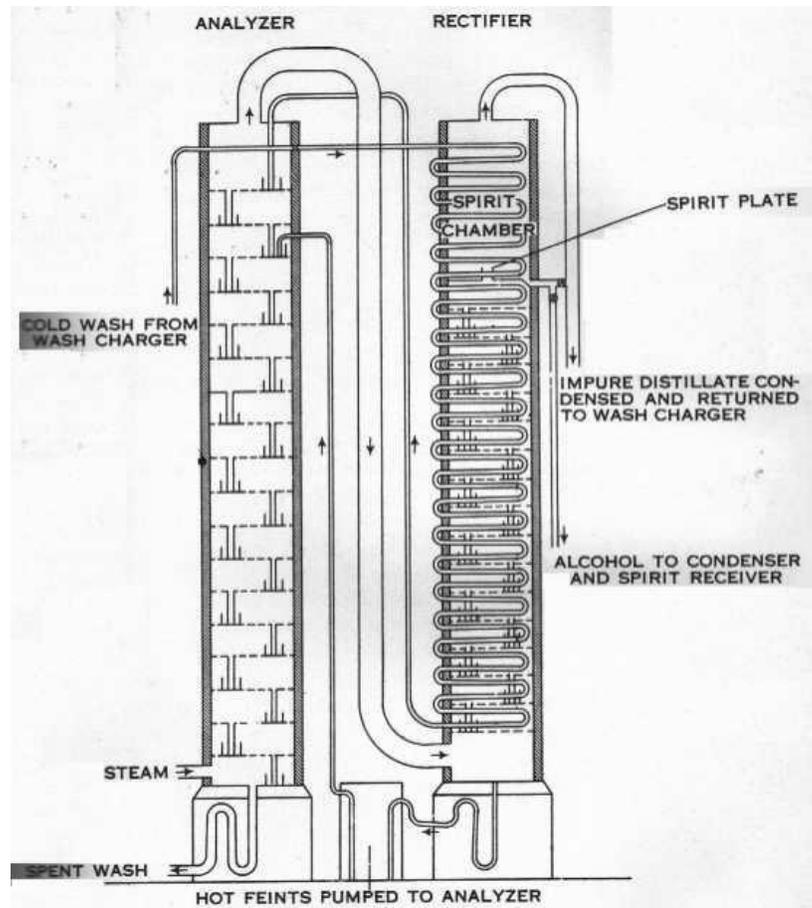
faintly, it was

called 'under

proof'. If it burst

into explosion, it was called 'over proof'. During that period, there were only these three categories of spirits. In the modern era with scientific measurement equipments like the hydrometer, it is possible to measure the exact percentage of alcohol by volume at a given temperature. The British Custom and Excise Act, 1952, universally accepted as definition is as follows:-

'Spirits shall be deemed to – sweet (white wine) be at proof, if the volume of ethyl alcohol contained there in made up to the volume of spirits with distilled water has a weight equal to that of 12/13th of a volume of spirits with distilled water has a weight equal to that of 12/13th of a volume of distilled water equal to the volume of spirits, the volume of each liquid being computed as at 51°F.' Internationally, the British Proof System is very much operational. All international brands must carry two units of measurement.



The Indian Custom and Excise Department has specified taxes precisely on the percentage of alcohol volume per volume (V/V). Standard percentage of alcohol should not exceed 42.8% alcohol V/V. Any spirit with higher percentage of alcohol will invite higher tax hence all Indian manufactured foreign liquor (IMFL) or any foreign liquor bottled in India has an alcoholic percentage of 42.8% V/V.

The three scales or systems of measuring the proof strength are:-

1. The British Proof System: Used generally in all commonwealth countries. Under this system, proof spirits contain 57% alcohol by volume, thus 70 degree British proof means 40% alcohol by volume.

2. The U.S. Proof System: Under this system, proof spirits contain 50 degree alcohol by volume, thus, 80 degree U.S. Proof means 40% alcohol by volume.

3. The Gay Lussac or OIML Scale: Metric system or Organisation International Metrologique Scale which gives the percentage of alcohol by volume thus 40% GL means 40% alcohol by volume.

For the Mathematicians :

4/7 British Proof	=	GL
½ U.S. Proof	=	GL
U.S. Proof	=	2 GL

Under Proof – A Spirit with an alcoholic strength which is below proof strength.

Over Proof – A Spirit with an alcoholic strength which is above proof strength.

13.4 Whisky

Malt Scotch Whisky: The process of producing malt whisky has, in essence, changed little through the centuries, although in recent years, greater automation and computerization in many distilleries has reduced the level of individual skill and experience required by the operators.

Despite any amount of automation, however, the fact remains that the 'make' of no two distilleries is ever the same. While it is possible to copy production methods and equipment, use the same water source, barley and yeast, and mature spirit for the same duration in the same type of casks within apparently identical micro-climates, the result will always be distinctly different spirits. Vast sums of money have been invested in the search for a definitive scientific evaluation of the variables in malt whisky making, but



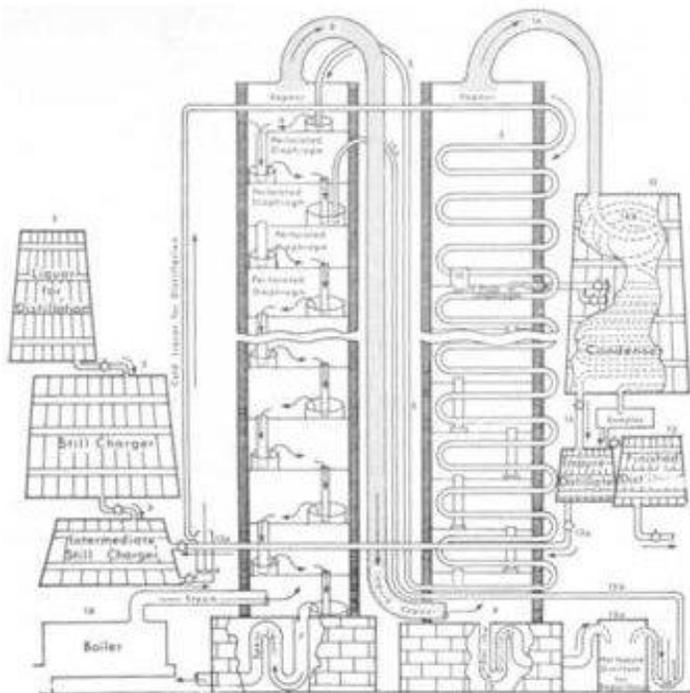
despite the best efforts of the scientists, an element of mystery remains. By law, Scotch malt whisky must be distilled entirely from a mash of malted barley, and the business of making malt whisky begins by malting barley in order to induce germination. In traditional distillery-based floor malting, the barley is steeped in water for two or three days, then spread on a malting floor, where rootlets develop as germination begins. So that the malt retains the sugars essential for fermentation, the partially germinated 'green malt', as it is known, is transferred to a kiln for around seven days and dried over a fire or by jets of hot air, usually with some peat used in the furnace to impart flavour. The amount of peat introduced during kilning has a major influence on the character of the finished whisky. Today, only a handful of distilleries still malt their own barley, with the vast majority buying in malt prepared to their specification by commercial maltsters in large, automated plants. Once dried, the malt is ground in a mill to produce 'grist,' after which the process of mashing begins. The grist is mixed with hot water in a large vessel known as a mash tun to extract fermentable sugars, and the sweet liquid that results from mashing is known as 'wort' The 'druff,' which is left behind is high in protein, and makes excellent cattle feed. The wort is pumped from the mash tun into a number of washbacks, traditionally made from Oregon pine or larch wood, but now frequently constructed of stainless steel. There yeast is added to promote fermentation and create alcohol. The end product of fermentation is a liquor known as 'wash,' which is transferred to copper pot wash stills, where it is brought to the boil. Alcohol boils at a lower temperature than water, so the alcohol vapours rise from the still first and are condensed into liquid when they pass through coiled copper pipes or 'worms', immersed in vast wooden vats, or more modern 'shell and tube' condensers. The alcohol produced must be re-distilled in order to obtain the most pure 'cut' of spirit that will mature into whisky, and this takes place in vessels known as spirit stills. Pot stills vary greatly in size, shape and technical design, and this diversity is one of the variables that contribute to the style of spirit made. The product of the spirit stills is referred to as 'new make' or 'clearic.' It is a clear liquid which is reduced with water from its natural strength to around 63 or 64 per cent alcohol by volume, as this is usually considered the optimum maturation strength. Most whisky is further reduced to 40 or 43 per cent prior to bottling. 40 per cent is the minimum legal strength at which Scotch whisky can be sold. There is also a legal minimum maturation period of three years, and that maturation has to take place in oak. However, most whisky marketed as single malt will have spent at least eight years in European or American oak casks which have previously contained either sherry or Bourbon. Some distillers believe that up to 75 per cent of the character of the spirit is derived from maturation, and the size of cask, as well as its previous contents, is yet another major variable of malt whisky production. By law, a single malt whisky must be the product of just one distillery, though many different casks of varying ages may be vatted together for any particular bottling.

Grain or Column Still Whiskey: Virtually all Bourbon, rye, Tennessee and Canadian whiskey, along with grain spirit for Scotch whisky blending, is distilled in column stills. Irish distillers use both pot and column stills, producing grain spirit, usually from corn, in the column stills, while what is termed Irish 'pure pot still whiskey' is made in pot stills from a mixture of both malted and raw barley. Compared to malt whisky distillation in pot stills, the production of whisky in a

column, continuous or patent still, as it is variously known, is significantly closer to an 'industrial' process. Grain whisky is made from a variety of cereals, including corn, wheat, and rye, which are less expensive to buy than the malted barley used to make malt whisky. The stills making grain spirit are versatile and highly efficient, as they can work continuously, whereas malt whisky distillation in pot stills is a 'batch' process, requiring time-consuming cleaning between each period of production. A much greater quantity of grain whisky can therefore be distilled in any given period. However, depending on the cereal in the 'mash bill,' the resultant spirit may be lacking in strong flavour compared to the product of the pot still. Certainly this is the case in Scotland, where virtually all grain whisky is distilled using wheat.

The processes of mashing and fermenting for grain whisky production are broadly comparable to those for making malt whisky, but distillation then takes place in a still which consists of two large, connected parallel stainless steel columns, called the analyser and the rectifier. The wash enters at the top of the rectifier column, where it is warmed by hot steam and is able to descend over a series of perforated copper plates. These plates serve the purpose of holding back heavier compounds, which flow from the bottom of the still, while the desirable volatile compounds are vaporised and pass over into the second, or analyser column. Here the vapours are cooled as they rise up the column, eventually evaporating and being collected in liquid form. It is possible to distil to strength of just below 95 per cent when producing grain whisky in a column still.

In the USA, the first column of the still is usually known as the 'beer still' while the second distillation takes place in either a 'doubler' or 'thumper' still, which is not dissimilar in style to a pot still.



Pot double still method

13.5 Brandy

Definition of Brandy: Brandy is the product gained by the distillation of fermented grape juice, which is then matured for a minimum of 3 years in Oakwood casks.

Origin of Brandy: The word “Brandy” is derived from the phrase “Burnt Wine (Dutch “Brand-Wein”); also called “Eau de Vie”, meaning “Water of Life”. An enterprising Dutchman, a wine shipper by profession, was the first one to distill wine so that more of it could be shipped in lesser space, and then diluted before selling. However, the distilled product had a complete unique bouquet and flavor, and customers started insisting on consuming the undiluted product. Thus, Brandy was created. The chief brandy-producing areas in France are the Cognac district, which lies north of Bordeaux, and Armagnac, which lies south-east of Bordeaux. All the Brandy produced within the areas mentioned below is called Cognac:

1. Grand Champagne
2. Petite Champagne
3. Les Borderies
4. Fins Bois
5. Bons Bois
6. Bois Ordinaires
7. Bois Commune

Only grapes produced in the Cognac or Charente region must be used for making Cognac. The only three grape varieties allowed under Appellation Cognac (A.C.) for production of Cognac are:

1. St. Emillion (Ugni Blanc)
2. Folle Blanche
3. Colombard

Production of Brandy:

1. **Picking of Grapes:** - Ripened grapes are plucked from the vineyards.
2. **Sorting & Screening:** - The grapes are graded by quality and state of ripeness by first sorting them manually and then screening them.
3. **Destalking:** - The stalks (small wooden part of grape with which the grape is attached to the vine) of grapes are removed manually.
4. **Pressing:** - The grapes are pressed using different methods like Archimedean Screw Press, Hydraulic Press, Revolving Cylinder Press (Centrifugal Press) to release the juice of the ripened grapes. The skin & seeds are not separated from the juice. This mixture of juice, skin & seeds, ready for fermentation, is called “MUST”.
5. **Fermentation:** - The yeast used for fermentation is called the *Saccharomyces Ellipsoideus*. The Must is fermented for 8-10 days. After completion of fermentation, one gets a harsh, full-bodied and acidic wine which contains approximately 8-10% alcohol. The fermented liquid, called “WORT” is separated from impurities by filtration.
6. **Distillation:** - The Wort or wine is distilled in a Pot Still, also called an Alembic Still. The wort is distilled twice for making Brandy. The first distillation is called “PREMIER CHAUFFE” and the distillate contains 25-

30% alcohol. The second and final distillation is called “BONNE CHAUFFE” and the distillate is approximately 43% alcohol. The product derived from double distillation is colourless and is fruity & coppery in taste.

7. **Maturation:** - If the flavour & body of the distillate is in need of improvement, then it is blended with an older brandy. Blended, or unblended, the liquor is then filled in casks made of the black oak or Limousin oak. This name originates from the Limousin forests near the Cognac district in France. The casks are then sealed and the maturation or ageing process of brandy starts. Brandy should be matured for a minimum of 3 years. However, French laws controlling the production of cognac require that cognac must be matured for at least 7 years. Maximum maturation found in cognacs in the market is 12 years, but a very select few cognac producers mature their product for up to 70 years. Cognacs matured for so long are very rare, and consequently, very expensive. They are either used for drinking on very special occasions or are blended with younger cognacs. 70 years old cognacs are stored in glass or ceramic jars because their rate of evaporation goes up to 1.5% - 2% per annum (year).

The black oak of the cask gives the brandy a glowing golden red colour. Black oak wood also contains the pigment “TANNIN”, which is vital for the colour and maturation of brandy.

Brandy ages only in casks, not in bottles. For example, a brandy produced in 1943 and kept for ageing in casks till 2003 will be 60 years old. If it is bottled in 2003 but brought to the market for selling in 2007, it will still be 60 years old.

COGNAC

All cognacs are brandies but all brandies are not cognacs. Only brandies produced under strict regulations within the territorial limits of the Cognac district from St. Emillion, Folle Blanche or Colombard variety of grapes grown within either Cognac or Charente districts can be labeled as Cognacs. The processing of grapes into Cognac is the same as that for regular brandies, but with only the best quality grapes, extremely stringent controls during pressing, fermentation, distillation, blending and maturation stages.

To be called a Cognac, a brandy should be matured for a minimum of 7 years.

Brand Names of Cognac

- | | |
|-------------------------|-----------------------|
| 1. Remy Martin V.S.O.P. | 2. Martell X.O. |
| 3. Camus X.O. | 4. Bisquit V.S.O.P. |
| 5. Monnet V.O. | 6. Hennessey V.S.O.P. |
| 7. Hennessey X.O. | 8. Girard V.S.P. |
| 9. Courvoisier V.S.O.P. | |



AGE & QUALITY DESIGNATIONS OF COGNAC

O.	- Old	(5 years)
V.O.	- Very Old	(5-10 years)
V.S.	- Very Superior	(10-15 years)
V.S.O.	- Very Superior Old	(15-20 years)
V.O.P.	- Very Old Pale	(15-20 years)
V.S.P.	- Very Superior Pale	(20-25 years)
V.S.O.P.	- Very Superior Old Pale	(25-30 years)
X.O.	- Extra Old	(Above 45 years)

Some Cognac manufacturers have their own labelling systems. For example, J & F Martell have the 3-star marking system:-

1 Star - V.S.O.P.	-	25-35 years
2 Stars - Cordon Bleu	-	35-60 years
3 Stars - Cordon Argent	-	Over 60 years

ARMAGNAC

Armagnacs, just like Cognacs, are also brandies of exceptional quality, bouquet and flavour, and therefore, command very high prices. They are produced in the Armagnac region, which is situated south-east of Bordeaux, near the Spanish border. The Armagnac region comprises of three regions:

1. Bas Armagnac
2. Haut Armagnac
3. Tenareze



Armagnac is distilled in the Patent or Continuous Still. It is matured in the black Gascony oak casks, which have high sap content. This means that Armagnac matures much faster compared to Cognac. Unlike Cognac, no caramel or sugar is added to Armagnac. Armagnac has a very distinctive flavour, very similar to that of prunes.

BRAND NAMES OF ARMAGNAC

- | | | |
|----------------------|----------------------|---------------|
| 1. Delord X.O. | 2. Mattiac X.O. | 3. Sempe V.O. |
| 4. Caussade V.S.O.P. | 5. Cles de Ducs V.S. | 6. Ryst X.O. |

FAMOUS BRANDY BRANDS OF OTHER COUNTRIES

- **India:** - Honey Bee, Doctor's, Teacher's, Aristocrat, Golconda, Hayward's.
- **California:** - Christian Brothers, Cresta Blanca, Petri, Lejon, Royal Host, Korbel, Almaden.
- **Spain:** - Carlos the 1st, Fundador, Capa Negra, Cardinal Mendoza.

13.6 Gin

Definition of Gin : Gin is a compound alcoholic beverage made by flavouring neutral spirit with berries of the Juniper plant (Scientific name – Juniperus Communis). Other flavours, like Angelica Root, Orris Root, Cardamom, Fennel,

Caraway Seeds, etc. may also be added according to the recipes of the producers.

Origin of Gin: The word “Gin” is derived from the Dutch word “Genevre” or the French word “Genièvre”, both of which mean “Juniper” in Dutch & French, respectively. Holland (or Netherlands) is the place of origin of Gin, where King William III, also known as William Orange, introduced this drink to the public in 1689. Gin was first prepared as a medicinal drink by Dr. Sylvius, a Dutch physician, for patients suffering from kidney infections & rheumatic diseases.

Dr. Sylvius, a professor of medicine at Holland’s University of Leyden, observed during research that the oil of juniper berries had diuretic (fighting kidney infections) properties as well as soothed rheumatic pain in the joints. So, he bought a few litres of neutral spirit, added ripened juniper berries to it, and let it stand for a week. Then, when all the solids had been filtered out of the liquid, it had a sweetish, heady aroma. Dr. Sylvius named it “Aqua Vitae”(Literally meaning “Water of Life”) and started prescribing it for patients with rheumatoid and kidney problems. Some of his patients, even after making full recovery, kept consuming the drink. They formed a loose group and started to produce this drink commercially for the first time, changing its name from Aqua Vitae, first to Geneva, and then to Gin. Slowly, the drink caught on and started being consumed socially.

PRODUCTION OF GIN

1. **Soaking & Malting:** - Gin can be either the Holland or the English (London Dry) variety. Holland gin is made from equal quantities of barley, corn & rye mixed together whereas London Dry gin is made from a mixture containing 75% corn, 15% barley & 10% other grain according to availability. The mixture of grain is soaked in distilled water, then spread on a wooden floor & allowed to malt.
2. **Toasting:** - After malting, the mixture of grain is subject to hot air to stop the malting. This is called toasting.
3. **Crushing & Boiling:** - The mixture is then crushed into a coarse consistency, mixed with water, and boiled. This results in the water absorbing all the fermentable carbohydrates from the crushed grains. At this stage, the mixture is called “Grist”.
4. **Straining & Carbohydration:** - The Grist is then passed through an extremely fine mesh so that all the solid particles are strained out. Sugar is then added to the liquid and it is boiled for 12 hours. This process is called Carbohydration and it further increases the amount of fermentable carbohydrates in the solution.
5. **Fermentation:** - The liquid is cooled down to 60°F, poured into large vats, and yeast is added to it. Producers of London Dry gin use the top-fermenting yeast called *Saccharomyces Cerevisae* while distilleries producing Holland gin use the bottom-fermenting yeast called *Saccharomyces Carlsbergensis*. Fermentation automatically stops when alcohol strength reaches about 8-10%. The fermented liquid is then filtered to remove any impurities.
6. **Distillation:** - Holland gin is distilled in Pot Still while London Dry gin is distilled in Patent Still. Holland gin is made by first distilling the fermented

liquid, then adding juniper berries and other botanicals to the distillate and putting the whole mixture through a second distillation. In case of English & American gin (Dry gin), the fermented liquid is first distilled in the Patent still. Then, juniper berries and other botanicals are added to the distillate and the whole mixture is again distilled, but this time in a Pot Still. Therefore, the Holland gin is produced by distilling the liquid twice in a Pot Still whereas Dry gin is produced by carrying out the first in a Patent Still and the second distillation in a Pot Still.

7. **Maturation:** - Though Gin is predominantly a “fresh”, that is, unmaturing drink, some producers of Holland gin prefer to age their product for 3 years or more in white Oakwood casks.

BRAND NAMES OF GIN

1. **London Dry Gin:** - John Booth's, Ballantine, Burrough's, Calvert, Gilbey's, Bombay Sapphire.
2. **Holland Gin:** - Bols, Doornkaat, De Kuyper.



INDIAN GIN BRAND NAMES

Blue Riband, Forbes' Dry Gin, High Society, Sikkim High & Dry, Blue Bull.

13.7 Rum

Definition of Rum: Rum is a highly aromatic alcoholic beverage made by fermenting molasses, the thick, dark brown by-product left after processing sugarcane juice into crystallized sugar. The fermented liquid is then distilled and caramelized sugar is added to it for colour.

Origin of Rum: Rum was invented by European sugarcane plantation owners settled in West Indies. It was observed that molasses, a by-product obtained when sugarcane juice is processed into sugar, if left exposed to air, would deteriorate and start smelling and tasting bitter. This gave the sugar producers an idea. While earlier, the only use that molasses could



be put to was to make candy for children, it was now fermented, distilled and darkened with caramelized sugar.

Thus was invented an alcoholic drink which was deemed “fit for the African slave labourers”, because whiskey was considered a “white man’s drink”. Today, however, Rum has far outstripped Whiskey in terms of popularity in the global market. There are many conflicting theories as to the origin of the word ‘Rum’. One theory points to the last three letters of the Latin word ‘Saccharum’, which literally means ‘Sugar’. Another theory claims that ‘Rum’ is a distortion of the word ‘Aroma’ which means ‘strong or powerful smell’. The most widely accepted theory, however, says that ‘Rum’ is a derivation of the French word ‘Rumbullion’, which is a homonym, that is, it has more than one meaning. ‘Rumbullion’ means ‘strong liquor’ and also ‘chaos’ or ‘great upheaval’.

Rum is divided into two varieties.

- i. **Light Bodied Rum** : Light bodied rums are produced by Spanish-speaking countries in the Latin American region (Puerto Rico, Virgin Islands, Cuba, Haiti, Santo Domingo, Mexico & Venezuela).
- ii. **Full Bodied Rum** : Full bodied rums are produced by the English-speaking countries in the Latin American region. A few countries, though outside Latin America, produce full bodied rums which are world-renowned for their quality & flavour. The chief producers of full bodied rums are West Indies (mostly Jamaica, Trinidad & Barbados), Demerara (British Guyana), Martinique, New England state in USA and Queensland state in Australia.

PRODUCTION OF RUM

1. **Dilution:** - The biggest cost-cutting factor in favour of Rum in comparison to other spirits is that one need not go through the process of malting to convert starch into fermentable sugar, because molasses itself is ready-to-ferment sugar. The first step in the processing of molasses into Rum consists of addition of distilled water to molasses to reduce its viscosity (thickness) and make it more ‘liquid’. This is done to ensure faster and uniform fermentation.
2. **Fermentation:** - The diluted molasses is poured into large fermentation vats and the residue of the last fermentation, called “Dunder” or “Dregs”, is added to it and the process of fermentation begins. Depending upon the quantity of the diluted molasses and that of the Dunder added to it, the process of fermentation may take anywhere from 2 to 20 days to complete.
3. **Filtration:** - The fermenting mass is put through filtration when the alcohol strength reaches 7-8%. This process removes all the solids from the fermented liquid. These solids are then dried and stored as Dunder or Dregs, to be used for fermenting the next stock of diluted molasses. The pure liquid is then sent for distillation.
4. **Distillation:** - There are no laws or regulations governing the type of distillation, minimum number of distillation cycles or minimum maturation period for the production of Rum. However, all producers of light bodied rum use the Patent Still whereas all full bodied rums are distilled in Pot Stills. Also, premium and deluxe quality rums are produced using the Pot Still while regular brands are produced using the Patent Still. Irrespective

of the type of still used, the distillate produced after a single distillation is too rough and harsh, both in smell and flavour, to be commercially viable. Therefore, all rum producers distill their product at least twice.

5. **Maturation:** - Though no regulation exists pertaining to a minimum period of maturation, all rums are first blended and then matured. All light bodied rums are matured in uncharred oak casks for 1-4 years while full bodied rums are matured in charred oak casks for 5-7 years.

After the distillation process is complete, one gets a colourless liquid which is approximately 90% alcohol. This distillate is then diluted with distilled water to bring down its alcoholic strength to within legal limits. Caramelized sugar is then added to it and it is blended with product from a few years back. Finally it is poured into Oakwood casks for maturation.

BRAND NAMES OF RUM

1. **White Rum:** - Bacardi Carta Blanca, Bacardi Limon, Dry Cane, Palo Viejo.
2. **Jamaican Rum (Full Bodied):-** Lemon Hart, Captain Morgan, Myers, Rope & Anchor, Squadron.
3. **Light Bodied Rum:** - Bacardi Reserva, Ron Morito, Mount Gay.
4. **Indian Rum:** - Old Cask, Old Monk, Old Smuggler, Bermuda, Contessa, McDowell's Celebration, Hercules, Royal Treasure, Whitefield.

13.8 Vodka

Definition of Vodka: Vodka is a distilled alcoholic beverage made from high starch-content grains such as rice, rye, corn and wheat. Though many decades ago vodka was made principally with potatoes, the use of potatoes for vodka production is very rare nowadays. Vodka is colourless, odourless and tasteless.

Origin of Vodka: Vodka has been made in Russia for over 700 years, but Russia's claim to being the country of origin of vodka is disputed by Poland and Ukraine. The Russian word "Voda" means "Water" and "Vodka" means "Little Water". Vodka, though produced and consumed in Russia for over 700 years, was introduced to the rest of the world only after the Russian Revolution of 1917, when people, fleeing to escape the newly established Communist regime, brought the art of vodka-making to the western world.

Though Russian in history and character, Vodka is today produced all over the world. Apart from Russia, the major vodka producing countries are Poland, Finland, Sweden, Great Britain and Czechoslovakia.

PRODUCTION OF VODKA

1. **Soaking & Malting:** - The grain (or mixture of grains) is soaked in water and spread out on a wooden floor for malting (germinating).
2. **Toasting:** - After the desired amount of malting is achieved, the grain is subjected to air heated to 150°C. This is done to prevent further germination of the grain. The time period of the grain's exposure to heated air should be

controlled expertly, allowing enough time for the malting process to stop completely, but not letting the grains become too brown.

3. **Crushing & Boiling:** - The malted grain is then crushed, mixed with water and boiled. This releases all the fermentable sugar into the water. The mixture is then cooled and passed through a fine mesh to remove all solid components. The pure liquid is now ready for fermentation.
4. **Fermentation:** - The liquid is poured into large fermentation vats along with yeast, which converts the sugar content of the liquid into alcohol. The fermentation stops automatically when the alcohol ratio of the liquid 8-10%. The fermented liquid is then purified by filtration and sent for distillation.
5. **Distillation:** - Vodka is distilled in the Patent Still. There is no law or regulation that requires a minimum number of distillation cycles that a stock of potential vodka has to go through, but most vodka distillers distill their product twice. Vodkas of exceptional quality are produced by triple distillation.
6. **Neutralization:** - The product, at the end of the distillation process, still contains marginal quantities of botanicals which alter the smell and flavour of the liquor. To remove them completely, the liquor is poured into a Filtration Tower which is 75-80 feet in height and contains consecutively repeating layers of activated vegetable charcoal, sand and quartz, each layer being approximately 2 feet thick. When the liquor passes through these layers, all the impurities as well as all the water content is absorbed by the charcoal, sand and quartz. The resulting liquor that pours out of the bottom of the tower is odourless, colourless and tasteless. Having lost all its water content, this filtered liquor is 100% concentrated alcohol.

13.9 Tequila

It is a Mexican spirit made by distilling the fermented juice of blue agave in the geographical region of Tequila city. The fermentation liquor is obtained from pinas resembling pine-apples which are crushed to obtain the juice. The juice is then distilled once or twice to obtain what is known as Tequila. Tequila is aged in oak vats to obtain golden colour while white tequila is matured in stainless steel or neutral oak barrels.

Types of Tequila : There are two basic categories of tequila:-

MIXTOS and 100% AGAVE – Mixtos are not less than 51% agave with other sugar making up the remainder. Mixtos use both glucose and fructose sugar. 100% agave tequila is bolder and more complex. They are aged in casks to take the flavour of wood and allow the harshness of alcohol to mellow. 100%



agave tequila has a more vegetal flavour as compared to grain spirit.

BOTTLING OF TEQUILA

Tequila is usually bottled in one of the five categories:-

1. **Blanco ('white') or Plata ('silver')** – This is traditional tequila, white in colour, un-aged and bottled immediately after distillation or aged for less than 2 months in stainless steel or oak casks. This tequila has the true bouquet and flavour of blue agave.
2. **Joven ('young') or Oro ('gold')** – This is blanco or silver tequila to which caramel or other food colouring is added to give it a golden colour. When caramel is added to silver tequila, it is less harsh as the caramel tones down the harshness in the mouth and throat.
3. **Anejo ('aged' or 'vintage')** – This is the tequila aged in old bourbon barrels for a minimum of 1 year but less than 3 years.
4. **Reposado ('rested')** – Tequila aged in wooden casks for a minimum of 2 months but less than a year in oak barrels.
5. **Extra Anejo ('extra aged' or 'ultra aged')** – Aged for a minimum of 3 years in oak barrels.

Ageing: Tequila like Blanco and Joven are bottled immediately after distillation and are not aged. Reposado is aged in oak casks or barrels to allow it inherit rich and complex flavour from the wood. The casks or barrels are made from oak which is obtained from United States, France and Canada. White oak wood is preferred for making the barrels or casks. Some companies may char the wood to impart a smoky flavour or use barrels which have been used to store other spirits like whiskey or wine. Some reposados are aged in new wood barrels to achieve the woody flavour and smoothness in less time.

Anejos are rested in barrels that have been previously used for ageing reposados. Barrels used to age whiskey like Bourbon whiskey or Canadian whiskeys are especially popular. This ageing gives the tequila its dark colour and complex flavour. After ageing for atleast 1 year, the anejos are removed from wood barrels and placed in stainless steel tanks to reduce the amount of evaporation that can occur in the barrels.

POPULAR BRAND NAMES OF TEQUILA

- Tequila Don Falano
- Tequila Jose Cuervo
- Tequila Patron
- Pepe Lopez
- Casa Noble
- Don Julio

Ways to drink Tequila : In Mexico, Tequila is often drunk straight. In some regions, it is a tradition to drink fine tequila with a side of Sangrita (a sweet, sour and spicy drink made from orange juice, grenadine or tomato juice and hot chilies). Equal sized shots of tequila and sangrita are sipped alternately without salt or lime. Another popular drink of Mexico is the 'Bandera' (flag) named after the Mexican flag. It consists of 3 shot glasses filled with lime juice (for green, white tequila and sangrias for red). They are sipped or drunk straight.

13.10 Summary

Sprits were popular since ancient times for their medicinal value. They were also used for purification of water and for tonics. The different methods of distillation of alcohol have been explained along with different methods used for producing different categories of sprits.

For the benefit of the students, sprits has been classified into various categories and the principal ingredients, method of production, service and popular brands name included in the unit. The students should be able to distinguish among the spirits, should remember popular brand names of all the sprits, their service and cocktails made from each category of sprite.

13.11 Key Words

- **Advokaat** : A thick and creamy egg liqueur, similar to egg.
- **Armagnac** : A grape brandy product of France. Armagnac is produced only in an area surrounding the city of Armagnac in southwest France. Related to Cognac, but less delicate.
- **Bitters** : An infusion of roots, barks, herbs and other botanicals mixed in special proportions. Bitters are classified for different uses as aromatic, flavoring, or laxative.
- **Bourbon** : A notable American whiskey named after Bourbon County, Kentucky where the whiskey was first produced in the post-Revolutionary period. All Bourbons use the fermented mash of corns, rye and barley malts. Straight Bourbons have been aged at least two years; Bourbons without the designation "straight" are aged less than two years.
- **Brandy** : A family of liquors distilled from the wines of grapes or other fruits.
- **Cognac** : A premium brandy produced only in a 150,000 acre area surrounding the city of Cognac in southwest France.
- **Cordial** : Sweetened, flavored liquors, also called liqueurs, produced with fruits or plants in a brandy or neutral spirit base.
- **Curacao** : An orange-flavored cordial produced from Curacao and sweet oranges. More delicate than Triple Sec.
- **Edelkirsch liqueur** : A German cherry liqueur produced from fresh cherryjuice and Kirshwasser (a cherry brandy).
- **Fruit brandy** : Brandy distilled from the wine of a particular fruit; since all brandy is fruit-based (most often grape), the term is somewhat redundant.
- **Grappa** : A brandy distilled from the pulpy residue of the wine press. In France, this brandy is called Marc, or eau de vie (i.e., brandy) de Marc.
- **Grenadine** : A red syrup used for flavoring, made from pomegranates, strawberries and raspberries.
- **Irish whiskey** : A notable whiskey from Ireland that may be prepared traditionally as a blend of straight pot still whiskies, or in the new style, as a blend of pot still and column still whiskies.
- **Jamaican rum** : A full-bodied, dark rum of Jamaica that is produced in pot stills.
- **Kirschwasser** : A clear brandy distilled from cherries.

- **Kummel** : A white liqueur produced using caraway and other seeds, herbs, and spices.
- **Marc** : Short for eau de vie de Marc, the French term for Grappa; see Grappa.
- **Scotch whisky** : A notable whiskey from Scotland that is prepared as a blend of hearty pot-distilled barley malt whiskies and light column-distilled grain whiskies.
- **Straight malt whiskey** : Whiskey distilled from a mash of grain of which not less than 51% must be malted barley, and aged in oak containers for a minimum of two years.
- **Tequila** : A type of liquor from Mexico distilled from the fermented juice of the Mescal plant, which resembles an oversized pineapple and takes years to grow.

13.12 Check Your Progress

The students are suggested to read this unit and attempt the following questions, hint has been given for the students to find the answer from the part of the unit containing the answer:

1. Define Alcohol. What are the different styles of alcohol? Ans. in 13.1

2. What is Distillation? How does it work? Ans. in 13.1

3. Explain : (1) Pot Still Method
 (2) Patent Still Method

4. What is Malt Whisky? How does it vary from Grain Whiskey? Ans. in 13.2

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5. Give 5 brand names of Cognac and Armagnac. Ans. in 13.4

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13.13 Bibliography

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13.14 Terminal Questions

1. Classify sprits and explain each type in 4-5 lines.
2. Compare Pot Still method with Patent Still method.
3. Compare Single Malt Whisky with Scotch Whiskey.
4. Define Brandy. Give its production.
5. What is Gin? How is it produced?
6. Give 5 brand names of following;
 - Premium Scotch Whisky
 - Cognac
 - Gin
 - Vodka
 - Tequila
7. Compare Gin with Vodka. Give 5 uses of each.
8. What is Proof? What are the different scales of measuring proof strength.
9. Short notes on:
 - Scotch Whiskey
 - Cognac
 - Patent Still

UNIT 14: ORDER-TAKING, SERVICE AND BILLING

Structure

14.1	Introduction
14.2	Objectives
14.3	Order Taking Procedure
14.4	Methods of Taking Food And Beverage Order
14.5	Room Service
14.6	Checkout and Settlement
14.7	Summary
14.8	Glossary
14.9	Answers to Check Your Progress Exercise
14.10	Reference / Bibliography
14.11	Suggested Readings
14.12	Terminal and Model Questions

14.1 Introduction

The previous units of this block you have gone through the Co-ordination of F&B Service with other departments; Organizational structure of F & B Service ; Job Description of F & B Service staff; menu knowledge, accompaniments, types, planning and French classical menu. In this unit you will study the Order-taking, Service and Billing procedures of the hospitality organisations.

Order taking is a skilful art that reflects the efficiency of both the waiter and the establishment. The order taker (waiter) should be skilful to handle array of customers efficiently. He should have a very good memory. He should have good oral communication skills. Knowledge about food and beverage, their garnishes and accompaniments, matching wines and spirits, cooking time and serving time, description of dishes in a lucid manner are other important qualities of order taker. He should also possess a rapid writing skill legible enough so that other subordinates can understand and execute the order. Hotels adopt different procedures to handle check out and bill settlements of the residents and visitors in the restaurants, which are discussed in detail in the present unit.

14.2 Objectives

After going through this Unit you will be able to:

- know the procedure to receive guests,
- to attend guests and taking restaurant order,
- Explain the methods of food & beverage order taking in the restaurant,
- Describe the order taking for the room service
- Define the checkout & settlement procedure of guest folio.

14.3 Order Taking Procedure

The order taking procedure in a hotel industry is discussed in detail in the following paragraphs.

14.3.1 Receiving the Guest

1. The welcoming of the guests represents the most important step to his final satisfaction and reflects the level and quality of the service of an establishment.
2. Guests must be welcomed from the entrance of the restaurant; they should not wait by themselves for more than 10 seconds at the entrance.
3. The first impression received by the guest is most important. It is not necessary to execute the whole welcoming procedure with each guests (it is not always possible in case of affluence), however, it is indispensable to show him that he has been taken into consideration, if it is only by eye contact.
4. If the hostess or the maître d' hote are occupied, the head waiter or the assistant waiter must show the guests that they have been taken into consideration.
5. If there is an overbooking problem (more tables have been reserved than the restaurant can welcome), guests should not be left at the entrance but invited to sit down at the bar and take care of the problem away from their presence.
6. The hostess or Maître d' must try to seat the guests if he / she has to modify the planning of reservations at the moment of the guests arrival.
7. The hostess or the head waiter will accompany the guests to his table and pull out the chair for him / her to sit.
8. The head waiter or the assistant waiter will immediately present himself to the table to show the guests that he has been taken into consideration.

14.3.2 Attending an Order

1. The waiter will approach the guest from the left, place the menus, ensuring they are clean, in front of him and enquire: "May I have your order please, sir / madam?"
2. He should wait patiently, facing the guests, until (after any necessary advice has been asked for and given) the order is completed as fast as and including the main course.
3. When the menus are long and varied, it is advisable to allow customers a few minutes before asking the order.
4. When it is apparent that there is a host, take his instructions first, otherwise receive orders as soon as the guests are ready.
5. If the waiter is busy and cannot attend to a customer at once, he should inform him that he will attend to him shortly or "in a moment".
6. When two tables are occupied at approximately the same time, the waiter must take the order of the first party first. Customers are apt to note with annoyance any failure to a "first come, first served" sequence.
7. Waiter must be aware not only of the speciality of the day but also reasonable dishes to recommend. He should know the following things as far as possible:

- Knowing which dishes are ready for quick service to guests in a hurry.
- Items suitable for children
- Salad, vegetable and potato suggestions for grills, roasts and main courses for a la carte guests.

14.3.3 Recording an Order

1. The Head Waiter should write in the corner of the order sheet; the table number and the number of persons being served. He also notes the time at which the order has been taken.
2. He takes the order for the appetizer; he indicates the number of guests for each appetizer opted.
3. He takes the order for the main dish. He writes the special notes at the right (example: choice of spice and hotness). He repeats the same for all the guests.
4. He takes the order for all other items.
5. He affixes his signature and hands it over to his back waiter.

14.3.4 Sample Procedure for Order Taking

1.	The front waiter presents himself to the table.	Table No: Covers:
2.	He indicates on the voucher the table number and the number of persons.	Table No: AS Covers: 4
3.	He writes down the time at which the order has been taken.	Table No: AS Covers:4 12h30m
4.	He takes the order for the first appetizer. He indicates the number of the guest corresponding to that order.	Table No: AS Covers:4 12h30m Shrimp Cocktail (1
5.	If the order of the second appetizer is identical, the head waiter will only indicate the chair number corresponding to the second guest.	Table No: AS Covers:4 12h30m Shrimp Cocktail (1,4
6.	If a guest does not take an appetizer, the head waiter will write on the voucher "no appetizer"	Table No: AS Covers:4 12h30m Shrimp Cocktail (1,4 No (3
7.	The head waiter takes the order of the last appetizer	Table No: AS Covers:4 12h30m Shrimp Cocktail (1,4 No (3 2 Bisque (2
8.	When the order of appetizers is finished, the head waiter writes the total number of dishes ordered	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3

		2 Bisque (2
9.	The head waiter takes the order of the main dish. The first guest does not take a main dish, the head waiter writes it down on the voucher	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 No(1
10.	He takes the order of the second dish.	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 No(1 Tournedos(3
11.	He asks the guest how he would like his meat cooked. He indicates this information on the right side of the voucher	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 No(1 Tournedos(3R
12.	He takes the order for the third guest.	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 No(1 Tournedos(3R 2wd
13.	He takes the order of the fourth guest	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 No(1 Tournedos(3R 2wd Homard (4
14.	He writes down the total number of dishes ordered	Table No: AS Covers:4 12h30m 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 1 No(1 2 Tournedos(3R 2wd 1 Homard (4
15.	He separates the different headings. He writes down the date and appends his initials in the right inferior part of the voucher. He transfers the voucher to his back waiter.	Table No: AS Covers:4 12h30m 4 Cartes 2 Shrimp Cocktail (1,4 1 No (3 2 Bisque (2 1 No(1 2 Tournedos(3R 2wd 1 Homard(4 18/02 Sz

14.4 Methods of Taking Food And Beverage Order

Essentially there are four methods of taking food and beverage orders from customers. All order taking methods are based upon these four concepts.

Triplicate Method	Order is taken, top copy goes to the supply point, second copy is sent to the cashier for billing; third copy is retained by the server as a means of reference during service.
Duplicate Method	Order is taken; top copy goes to the supply point, second copy is retained for service and billing purposes.
Service with Order Method	Order is taken; customer is served and payment received according to that order, for example, bar service or take-away methods.
Pre-Ordered Method	<ul style="list-style-type: none"> • Individually (example room service breakfast) • Hospital tray system • Functions

CHECK YOUR PROGRESS- I

1) Discuss the procedure for receiving guests in the f & B outlet?

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2) Write short note on the sample procedure for the order taking?

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14.5 Room Service

Room Service generally includes the same dishes offered in the restaurant. A three star category hotel should be able to serve at least breakfast in the rooms. Room service is part of the food and beverage department and not of housekeeping. The room service can also be responsible, after the closing of the hotel bar, to serve beverages in the rooms and manage the mini-bar.

Waiter will use trays (carried high over the shoulder with the left hand) or rolling tables for the meals. Every element should be covered (film paper, carton, bells) during transportation and uncovered when entered the room.

The Room Service is often situated inside the kitchen, and close to the service elevator. In this way hot preparations can be served as fast as possible. Inside this service, the following are found:

- Working station
- Toaster
- Sink
- Coffee / tea machine
- Products shelves (cereals, sugar...)
- Tray shelf
- Refrigerator
- Order taking office / desk

14.5.1 Room Service Order Taking

One can order room service in two ways:

1. By “door hanger”
2. By “telephone”

1. By Door Hanger: It is a document that the guest places on the exterior room door knob. The night audit picks up all the documents during the night. This system allows the room service employees to be ready and serve the guests on time.

This document is often made up of two faces written down in two languages and is placed by housekeeping on the head of the bed. The information found in this document are the following:

- a. The service hour desired by the guest, leaving a margin of a quarter of hour (for example between 8:00 and 8:15 a.m.)
- b. The name of the guest
- c. The number of people
- d. The room number
- e. The detailed order of breakfast desired (filled in cases)
- f. A choice of newspaper proposed by the establishment

2. By Telephone: The room service order is placed through telephone. In fact, it is very difficult to take an order correctly by telephone. One must be fast, not to forget any important information and try to sell the maximum to the guest.

For a maximum efficiency, the Room-service personnel use digital telephones that indicate the name of the person and the room number, and the possibility to display the room number of the previous call in case they forget.

The room service order is written down manually or computerized and it should include the following information:

- a. Room number
- b. Name of the guest
- c. Number of persons
- d. Detailed order
- e. Hour the order is taken
- f. Service hour

The service should be fast and discrete. The service procedure is as follows:

- a) Verify the guest's name on the bill
- b) Knock on the door
- c) Announce "room service"
- a) Remove plastic films from the food
- b) Wait until the guest invites the waiter to come in
- c) Express wishes "good morning, good afternoon, good evening, call the guest by his last name (good morning mister X).
- d) Ask where to place the tray
- e) List the different food items ordered by the guest
- f) Ask the guest to sign the bill
- g) Thank the guest and explain the procedure to take away the tray

It is to the room service to clear away the tray when the guests have finished, either by asking them to place their tray outside of their room when they have finished, and to clear it 20 minutes after the service or by asking the guest to call them to come clear away the tray, which is more delicate because the waiter must come in the guest's intimacy the least possible. It is the object of conflict between housekeeping and the room service departments. In fact, there is nothing worst than a floor where there is dirty trays lying on the floor. One should consider that the job of the room service is finished only when all trays have been cleared away.

The room service employee must have general knowledge about the hotel premises. The room service employee is often the only one to be in direct contact with the guest during his stay. The guest often asks questions concerning the technical equipment of the rooms, the hotel premises, or any other information, and the waiter must be able to answer to any need.

14.6 Checkout and Bill Settlement

Check out and settlement is part of the final stages of the guest cycle. It is the final phase of the guest cycle and examines the various activities involved in checkout and settlement. Check out involves the front desk as also other departments such as housekeeping, bell desk, cashier's desk, Point of sales etc. Main areas for a checkout are the bell desk and the cashier. The Front Office performs at least 3 important functions during the checkout and settlement process.

- It resolves outstanding guest account balances.
- It updates room status information
- It creates guest history records.

Guest account settlement depends on effective Front Office accounting system that maintains accurate guest folios, verifies and authorizes a method of settlement and resolves discrepancies in account balances. Hotels find it most effective to settle a guest account while the guest is still in the hotel.

Guest can settle the bill by paying cash, charging the balance to a credit card, deferring payment to an approved direct billing entity or using a combination of payment methods.

Most hotels require a guest to specify during registration an eventual method of settlement. Front Office should verify or confirm guest credit card or direct billing information before he/she arrives at the desk for check out. Pre - settlement verification activities ensure that the hotel will be paid for accommodation and services.

14.6.1 Departure Activities

1) At the Bell Desk: During checkout a luggage out pass has to be obtained from the cashier stating that the guest has settled his account and returned the room key. Once this is received a departure errand card is made and filled out by the bell boy and will go to the guest room to bring down the luggage. The bell captain will also make an entry regarding this in the bell captain's control sheet. On reaching the guest room the bell boy will announce himself, knock on the door enter the room on gaining permission. The bellboy will also ensure the following:

1. Collect room keys from the guest
2. Check the room for any possible damage to the property.
3. Draws the curtains, locks the balcony.
4. Checks bathroom and fittings.
5. The guest is escorted by him to the front desk
6. He puts a "room to be cleaned tag" card on the door after switching of the lights and air conditioner.

The departure room is then inspected by a housekeeping supervisor/ Room attendant to ensure that nothing is left behind by the guest. The housekeeping/ in room dining department will also check the mini bar for anything consumed by the guest to be charged to the bill.

At the lobby the bell boy will:

1. Keep the guest's luggage at the bell desk
2. Put hotel stickers and mark the luggage with "D" indicating departure luggage.
3. Collect the luggage out clearance slip from the reception and loads the luggage in the car/taxi.
4. Return the errand card to the bell captain which will then be entered onto the bell captain's control sheet.

2. At the Reception Desk: The Front desk receptionist ensures the following at the time of guest's check out:

1. Checks the list of expected checkouts for the day and will confirm with the guest his date and time of checkout.
2. Departure notification slips are printed to inform the other departments of the guest's checkout.
3. In a manual system the room racks are updated. The departure register is also updated.
4. Checking for the mail messages and faxes.
5. Checking for safe deposit box or in room safe keys.

3) At the Cashier's Desk: The following activities are performed during checkout:

1. Verifying account information.
2. Posting any remaining charges to the guest's folio.
3. Presenting the guest folio.
4. Verifying the method of payment.
5. Processing the account payment.
6. Securing the room key.
7. Updating the room status.

The procedures used will vary among Front Offices depending upon hotels level of service and degree of automation. Some Front Offices offer automated or express check out.

Traditionally at check out guest is presented a final copy of his/her account folio for review and settlement. FOA should confirm how the guest intends to settle the account. Guest may establish credit by presenting a credit card but may choose to settle his bill by cash or travelers cheques. VIP or special guests or corporate accounts should not be asked for settlement if their account is marked that all charges are to be Direct Billed.

FOA should bring the guest account balance to zero, called zeroing out. When guest pays by cash or credit card, hotels assume that the payment is full and close the folio. If the account is to be paid through Direct Billing by the hotel, however the account is not brought to a zero balance because it must be transferred to the city ledger and billed through the account receivable system.

14.6.2. Methods of Bill Settlement

A guest account can be brought to a zero balance in several ways. Methods of bill settlement include cash payment, credit card or Direct Billing transfer or combined settlement method.

1. Cash Payment in Full: Cash payment in full at check out will bring a guest account balance to zero. A cash receipt has to be issued to the guest by the cashier. The cashier should mark the folio paid. If the guest has produced a credit card at check in, the cashier should destroy the guest credit card voucher imprinted at registration when the guest pays the account in full with cash. Guests paying in foreign currency should convert their money to local currency (some international currencies like \$ are accepted). Hotels often charge a fee to convert currencies as banks charge the fee from the hotels. Currency conversion rates are displayed at the Cashiers counter or it can also be taken from business

sections of newspapers. Guests can also use traveler's cheques to settle their bills. Traveler's cheques are issued by banks and avoid the risk of carrying cash. At the time of settlement the cashier should confirm the identity of the guest from the safety and security point of view. Also there is no danger of them being stolen as they can be encashed only when the signature of the holder tallies with the signature signed at the time of issue. A foreign traveler's cheque should be treated as foreign currency and the necessary records, statements and certificates must be maintained like in the case of foreign currency and should be sent to the Reserve Bank of India. Difference between an ordinary cheque and a traveler's cheque are listed as below:

Ordinary Cheque	Travelers Cheque
1. For issuing a person should have a bank account (either current or saving).	1. No need of any bank account for purchasing and encashing of traveler's cheque.
2. Any amount can be filled in the cheque as they are blank.	2. Have a fixed amount printed on its face and available in different denominations.
3. Only one signature is needed of the holder.	3. Two signatures are required (one in the presence of the issuing authority and second in the presence of encashing authority).
4. Ordinary cheques are valid only for 3-6 months.	4. Valid for indefinite period of time unless dated.
5. These cheques can be crossed for account payee.	5. No such provision.
6. No slip/list of lost, damaged or stolen cheques is issued by the bank.	6. Many banks issue a stop list for stolen and damaged cheques.
7. Cheque may bounce as the balance in the account may be less than the cheque	7. No such possibility as the amount is already printed on the face of the cheque.
8. Not safe as someone might force the owner to sign the cheque.	8. Quite safe because the second signature have to be put in front of the encashing authority.

PROCEDURE FOR ACCEPTING FOREIGN CURRENCY

1. Request guest passport and determine the credentials such as name and photo identification place of issue and date of expiry of the passport.
2. Confirm that the guest is a resident of the hotel by asking his room no. If the guest is a non-resident the permission of the lobby manager is obtained who will extend this facility to VIP's and regular guests.
3. Receive the cash or traveler's cheque in foreign currency.
4. Calculate the total amount of local currency to be paid by multiplying the foreign currency by the exchange rate displayed.
5. Fill in details of the foreign currency encashment certificate.

6. Request the guest to sign the foreign currency encashment certificate and compare the signature with the passport.
7. Request the guest to sign the traveler's cheque if it is an instrument of exchange.
8. Give the total amount of local currency with the encashment certificate to the guest
9. Second copy of the certificate is attached to the notes or traveler's cheques received
10. Third copy remains in the encashment certificate book.
11. Fill in details in the record of foreign currency transactions.
12. Fill in details of the foreign currency transaction in the cashier's report.

2. Credit Card Transfer: Even though credit card transfer settlement brings a guest account to zero, the amount of the charge must be tracked until payment is actually received from the credit card Co. Credit card settlement creates a transfer of credit on the guest folio and moves an account balance from the guest ledger to a credit card account in the city ledger (non- guest ledger). Guest signature completes this transaction. In some hotels computer system sends the settlement transactions directly to the credit card Co. guest only signs on the voucher present at Front Office. There is no need to sign on imprinted voucher. When foreign guests pay by credit card, credit card Co. payment is in local currency.

3. Direct Billing Transfer: Like credit card settlement, direct billing transfers a guest account balance from the guest ledger to the city ledger. Unlike credit card settlement responsibility for billing and collecting a direct billing lies with the hotel rather than an outside agency. Billing should be arranged and approved by hotel's credit department. Guest signs the folio and accepts the responsibility to pay the bill should direct billing account not pay the bill.

4. Combined Settlement Method: A guest may elect to use more than one settlement method to bring the folio balance to zero. E.g., guest may make partial cash payment and charge the remainder of the account balance to an acceptable credit card. Front office Assistant must accurately record the combined settlement methods and take care that all required paper work is properly completed. Once the guest has settled the account the Front office Assistant should provide the guest with a copy of the folio. Good evaluation and follow up should be there as it is the last chance to make an impression.

14.6.3 Unpaid Account Balances

No matter how carefully the front office monitors guest's stay there is always possibility that the guest will leave without settling his account. Guest may forget to check out or front office may discover late charges for a guest who has already checked out. After departure charges or outstanding balances represent unpaid account balances. Late Charges may be a major concern in guest account settlement. Restaurant, telephone, room service charges etc are the examples of some potential late charges. Sometimes additional cost of postage, stationary,

labor, etc is more than the late charge itself. It is important in maximizing the profitability. The following steps can be taken to reduce late charges in automated and semi automated front office:

- Post transactional vouchers as soon as they arrive at the front desk.
- Survey front office equipment and voucher and folio racks for un posted charges.
E.g., local telephone, in room movie charge meters may possess information not recorded in a voucher.
- Ask departing guests whether they have incurred any charge purchase or long distance calls that do not appear on the folio.

Front may appoint runners to collect vouchers or get information on phone at peak hours. Front office computer system that interfaces with revenue center outlets is often the most effective means of reducing or even eliminating late charges. Room key deposits at reception counter help in reducing unpaid balances.

14.6.4 Account Collection

Late charges that are billed to departed guests should not be classified as uncollectible until the front office has exhausted all billing and collection procedures. A registration card should contain guest address, phone number etc. Procedures for collection of late charges will be different for cash and credit card depending on company policy for late charges. Guest account not settled at check out regardless of the credit established or prepayments processed during registration are transferred from the guest ledger to the city ledger, from front office to hotels accounting division. To be effective, the front office must establish a policy for billing departed guests with overdue account. Account receivable billing includes determining:

- When outstanding account balances are payable.
- The number of days between billing.
- How to control departed guests whose accounts are overdue.

Collection schedules can range from aggressive (short cycle) to lenient (long cycle) depending on the hotels financial needs, clientele profile, history of collection patterns and so on.

- Firm in any encounters involving deferred payment.
- Documented procedure for collecting overdoes.
- Credit for tour group to be established well before they arrive.
- Uncollectible accounts to be sent back to the departments that originally accepted the uncollectible charge.

14.6.5 Guest Histories

Front office management can better understand its clientele and determine guest trends when it develops and maintains a guest history file. It contains personal and financial data of the guest hence it is confidential and proprietary. It is the last step in check out and account settlement. Many hotels build guest history cards from expired registration cards. It has information about the guest's

spouse, family etc. the information may help develop ads that appeal to the types of clientele the hotel is attempting to attract. Guest histories may also point out the need for new, supplementary or enhanced services.

CHECK YOUR PROGRESS- II

1) Write the short note on the room service order taking?

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2) Write in short about the procedure for accepting foreign currency?

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14.7 Summary

Order taking is a skilful art that reflects the efficiency of both the waiter and the establishment. The order taking procedure includes welcoming of the guests, attending an order and recording an order. Essentially there are four methods of taking food and beverage orders from customers. All order taking methods are based upon these four concepts: triplicate method, duplicate method, service with order method and pre-ordered method. Room Service generally includes the same dishes offered in the restaurant. Room service is the responsibility of the food and beverage department and not of housekeeping. Waiter will use trays or rolling tables for the meals. Every item should be covered during transportation and uncovered when entered the room. One can order room service in two ways: by door hanger and by telephone. The hotel / restaurant may follow a predefined procedure for the check outs and the settlements of the guest's folio. The payment can be made for the hospitality services & products as cash payment, credit card or Direct Billing transfer or combined settlement method.

14.8 Glossary

- **Triplicate Method:** in this method the order is taken in three copies. The top copy goes to the supply point, second copy is sent to the cashier for billing; third copy is retained by the server as a means of reference during service
- **Duplicate Method:** in this method the order is taken in two copies. The top copy goes to the supply point, second copy is retained for service and billing purposes

- **Traveler's Cheques:** These are issued by reputed banks to avoid the risk of carrying cash
- **Combined Settlement Method:** A guest may elect to use more than one settlement method to bring the folio balance to zero.

14.9 Answers to Check Your Progress Exercise

Check Your Progress - I

1. Please refer section 13.3.1
2. Please refer section 14.3.4

Check Your Progress - II

1. Please refer section 14.5.1
2. Please refer section 14.6.2

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14.11 Suggested Readings

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2. Beverage Management – Michael Coltman
3. Table and Bar – Jeffrey Clarke
4. Dixit S.K. (ed): Promises & Perils in Hospitality & Tourism Management, Aman Publications, New Delhi, 2005.
5. Lillicrap Dennis, Cousins John & Smith Robert: Food & Beverage Services; Hodder & Stoughton Educational.
6. Essential Table Service for Restaurants – John Fuller
7. The Waiter Handbook, Grahm Brown, Global books & Subscription Services, New Delhi

14.12 Terminal Questions

1. What are the precautions to be taken in recording an order?
2. What are the different types of formats in use in order taking?
3. What is meant by 'door hanger' method? Furnish procedure.
4. What is the service procedure to be followed for room service?
5. Write a descriptive note on the different methods of bill settlements?