BHHM 08

VARDHMAN MAHAVEER OPEN UNIVERSITY, KOTA

Food and Beverage Operations & Controls

Vardhaman Mahaveer Open University, Kota

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BHHM-08 Food and Beverage Operations & Controls

Unit 1

Introduction to Alcoholic Beverage & Bar

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- Student know about Bar stock – alcohol & non alcoholic beverages Setting of a cocktail bar
- Student know about the Opening and closing duties of bar.

1.1 Introduction

An **alcoholic beverage** is a drink that typically contains 3% – 40% alcohol (ethanol). Alcoholic beverages are divided into three classes: beers, wines, and spirits (distilled beverages). They are legally consumed in most countries around the world. More than 100 countries have laws regulating their production, sale, and consumption.

Alcoholic beverages have been produced and consumed by humans since the Neolithic Era, from hunter-gatherer peoples to nation-states. There is evidence indicating the preparation of alcoholic drinks dating as far back as 8,000 BC.

Alcohol in carbonated beverages is absorbed faster than alcohol in non-carbonated drinks. Another study also confirmed this, conducted at the University of Surrey in the United Kingdom gave subjects equal amounts of flat and sparkling Champagne which contained the same levels of alcohol. After 5 minutes following consumption, the group that had the sparkling wine had 54 milligrams of alcohol in their blood while the group that had the same sparkling wine, only flat, had 39 milligrams.

The global alcoholic beverages industry is expected to exceed $1 trillion in 2014.

A **bar** is a retail business establishment that serves alcoholic drinks — beer, wine, liquor, and cocktails — for consumption on the premises.

Bars provide stools or chairs that are placed at tables or counters for their patrons. Some bars have entertainment on a stage, such as a live band, comedians, go-go dancers, orstrippers. Bars which offer entertainment or live music are referred to as music bars or nightclubs.

Types of bars range from dive bars to elegant places of entertainment for the elite.

Many bars have a happy hour to encourage off-peak patronage. Bars that fill to capacity sometimes implement acover charge or a minimum purchase requirement during their peak hours. Such bars often feature entertainment, which may be a live band or a disc jockey playing recorded music.

The term "bar" is derived from the specialized counter on which drinks are served. Patrons may sit or stand at the bar and be served by the bartender, or they may sit at tables and be served by cocktail servers. The "back bar" is a set of shelves of glasses and bottles behind that counter. In some establishments, the back bar is elaborately decorated with woodwork,etched glass, mirrors, and lights.

1.2 History and facts file

There have been many different names for public drinking spaces throughout history. In the colonial era of the United States taverns were an important meeting place, as other most other institutions were weak. During the 19th century saloons were very important to the leisure time of the working class. Today, even when an establishment uses a different name, such as "tavern," the area of the establishment where the bartender pours or mixes alcoholic beverages is normally called "the bar."

The sale and/or consumption of alcoholic beverages was prohibited in the first half of the 20th century in several countries, including Finland, Iceland, Norway, and the United States. In the United States, illegal bars during Prohibition were called speakeasies or blind pigs.

1.3 Definitions

What is an Alcoholic Beverage ?

Literally, any potable liquid containing from 1/2 % to 75% of ethyl alcohol by volume is an alcoholic beverage. Potable alcohol is gained by :

Fermentation : Sugar in fruitor in grain (developed by germination & malting) is converted by action of bacteria into alcohol. Carbon-di-oxide is a by- product & can be retained as in Beers & Champagne or released as in Still Wines.

Distillation :

A fermented mash or fruit or grain is heated. Alcohol which evaporates at a lower temperature than water can be tapped & condensed to a liquid by cooling. Pure alcohol has no colour, taste or smell & is used in comounding other beverages i.e. Liqueurs & Cordials (sweetened after dinner drinks). All distillates are colourless (clear). The colours to be found in alcoholic beverages are arrived at during the aging process brought about through contact with wood over long periods or through contact with smoke or smoked wood or by steeping the flaouring agent in the distilled spirit.

Proof Spirit :

Means a measure of the alcoholic content of a beverage. The term originally arose from the old customary method of checking alcoholic content. The liquid was applied to gun-powder & if when touched with a flame, the gunpowder ignited the liquid was termed 100% proof & 57% by volume when bottled.

Wines	Grapes
Beer	Grain (Barley / Maize)
Rum	Sugar Cane
Gin	Maize or Barley
Vodka	Potato or Cereals
Tequila	Mezcal - Cactus
Whisky	Roasted Barley called Malt

1.4 Production of Alcohol :- Fermentation process , Distillation process

Fermented beverages

1. Distillation

Physical reaction/separation of fermented solutions to produced distilled beverages with higher content of alcohol

Wine

Wine is a fermented beverage produced from grapes. Wine involves a longer fermentation process than beer and also a long aging process (months or years), resulting in an alcohol content of 9%–16% ABV. Sparkling wine can be made by means of asecondary fermentation.

Beverages called "fruit wines" are made from fruits such as plums, cherries, or apples. The kind of fruit must be specified on the label.

Beer

Beer is a beverage fermented from grain mash. It is made from barley or a blend of several grains. If the fermented mash is distilled, then the beverage is a spirit. Beer is the most consumed alcoholic beverage in the world.

Cider

Cider or cyder (/ˈsaɪdər/ ***SY-dər***) is a fermented alcoholic beverage made from any fruit juice; apple juice (traditional and most common), peaches, pears ("Perry" cider) or other fruit. Cider alcohol content varies from 1.2% ABV to 8.5% or more in traditional English ciders. In some regions, cider may be called "apple wine".

Distilled beverages

A **distilled beverage**, **spirit**, or **liquor** is an alcoholic beverage produced by distilling (i.e., concentrating by distillation) ethanol produced by means of fermenting grain, fruit, or vegetables. Unsweetened, distilled, alcoholic beverages that have an alcohol content of at least 20% ABV are called *spirits*. For the most common distilled beverages, such as whiskey and vodka, the alcohol content is around 40%. The term **hard liquor** is used in North America to distinguish distilled beverages from un distilled ones (implicitly weaker). Vodka, gin,baijiu, tequila, whiskey, brandy, and soju are examples of distilled beverages. Distilling concentrates the alcohol and eliminates some of the congeners. Freeze distillation concentrates ethanol along with methanol and fusel alcohols(fermentation by-products partially removed by distillation) inapplejack. Paracelsus gave alcohol its modern name, which is derived from an Arabic word that means “finely divided” (a reference to distillation).

Fortified wine is wine, such as port or sherry, to which a distilled beverage (usually brandy) has been added. Fortified wine is distinguished from spirits made from wine in that spirits are produced by means of distillation, while fortified wine is simply wine that has had a spirit added to it. Many different styles of fortified wine have been developed, including port, sherry, madeira, marsala, commandaria, and the aromatized wine vermouth.

Aperitifs and digestifs

An aperitif is any alcoholic beverage usually served before a meal to stimulate the appetite while a digest if is any alcoholic beverage served after a meal for the purpose of improving digestion.

Fortified wine, liqueurs, and dry champagne are common aperitifs. Because aperitifs are served before dining, they are usually dry rather than sweet.

Flavouring

Pure ethanol tastes bitter to humans, slightly fewer people also describe it as sweet. However, ethanol (alcohol) is also a moderately good solvent for many fatty substances and essential oils. This attribute facilitates the use of flavouring and colouring compounds in alcoholic beverages as a taste mask, especially in distilled beverages. Flavours may be naturally present in the beverage’s raw material. Beer and wine may be flavoured before fermentation. Spirits may be

flavoured before, during, or after distillation. Sometimes flavour is obtained by allowing the beverage to stand for months or years in oak barrels, usually American or French oak. A few brands of spirits have fruit or herbs inserted into the bottle at the time of bottling.

Congeners

In the alcoholic beverages industry, congeners are substances produced during fermentation.

These substances include small amounts of chemicals such as occasionally desired other alcohols, like propenol and 3-methyl-1-butanol, but also compounds that are never desired such as acetone, acetaldehyde, esters, glycols, and ethyl acetate. Congeners are responsible for most of the taste and aroma of distilled alcoholic beverages, and contribute to the taste of non-distilled drinks. It has been suggested that these substances contribute to the symptoms of a hangover.

Tannins are congeners found in wine in the presence of phenolic compounds. Wine tannins add bitterness, have a drying sensation, taste herbaceous and are often described as astringent. Wine tannins adds balance, complexity, structure and makes a wine last longer, so they play an important role in the aging of wine.

Rectified spirit

Rectified spirit, also called "neutral grain spirit," is alcohol which has been purified by means of "rectification" (i.e., repeated distillation). The term "neutral" refers to the spirit's lacking the flavour that would have been present if the mash ingredients had been distilled to a lower level of alcoholic purity. Rectified spirit also lacks any flavouring added to it after distillation (as is done, for example, with gin). Other kinds of spirits, such as whiskey, are distilled to a lower alcohol percentage in order to preserve the flavour of the mash.

Rectified spirit is a clear, colourless, flammable liquid that may contain as much as 95% ABV. It is often used for medicinal purposes. It may be a grain spirit or it may be made from other plants. It is used in mixed drinks, liqueurs, and tinctures, but also as a household solvent.

Alcohol concentration (ABV) **Typical ABV ranges**	
Beers	3–15%
Wines	8–17%
Fortified wines	15–22%

Spirits	15–98%
Fruit juices	< 0.1%
Cider, wine coolers	4–8%

The concentration of alcohol in a beverage is usually stated as the percentage of alcohol by volume (ABV, the number of ml of pure ethanol in 100 ml of beverage) or as *proof*. In the United States, *proof* is twice the percentage of alcohol by volume at 60 degrees Fahrenheit (e.g. 80 proof = 40% ABV). *Degrees proof* were formerly used in the United Kingdom, where 100 degrees proof was equivalent to 57.1% ABV. Historically, this was the most dilute spirit that would sustain the combustion of gunpowder.

Ordinary distillation cannot produce alcohol of more than 95.6% ABV (191.2 proof) because at that point alcohol is an azeotrope with water. A spirit which contains a very high level of alcohol and *does not contain any added flavoring* is commonly called a neutral spirit. Generally, any distilled alcoholic beverage of 170 proof or higher is considered to be a neutral spirit.[1]

Most yeasts cannot reproduce when the concentration of alcohol is higher than about 18%, so that is the practical limit for the strength of fermented beverages such as wine, beer, and sake. However, some strains of yeast have been developed that can reproduce in solutions of up to 25% ABV.

1.5 Classification with examples Bar organization and profiling of jobs

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.

A cocktail lounge is an upscale bar that is typically located within a hotel, restaurant, or airport.

A full bar serves liquor, cocktails, wine, and beer.

A wine bar is an elegant bar that focuses on wine rather than on beer or liquor. Patrons of these bars may taste winesbefore deciding to buy them. Some wine bars also serve small plates of food or other snacks.

A beer bar focuses on beer, particularly craft beer, rather than on wine or liquor. A brew pub has an on-site brewery and serves craft beers.

"Fern bar" is an American slang term for an upscale or preppy (or yuppie) bar.

A music bar is a bar that presents live music as an attraction.

A dive bar, often referred to simply as a "dive," is a very informal bar which may be considered by some to be disreputable.

Entertainmen

Bars categorized by the kind of entertainment they offer:

- Blues bars, specializing in the live blues style of music.
- Comedy bars, specializing in stand-up comedy entertainment.
- Dance bars, which have a dance floor where patrons dance to recorded music. But if a dance bar has a large dance floor and hires well-known professional DJs, it is considered to be a nightclub or discothèque.
- Karaoke bars, with nightly karaoke as entertainment.
- Music bars, specializing in live music (i.e. concerts).
- Drag bars, which have live shows, where men dress as women and generally lip-sync to recordings of female vocal artists; often with hilarious results.
- Salsa bars, where patrons dance to Latin salsa music.
- Sports bars, where sports fans watch games on large-screen televisions.
- Topless bars, where topless female employees dance or serve drinks.

Patrons

Bars categorized by the kind of patrons who frequent them:

- Biker bars, which are bars frequented by motorcycle enthusiasts and (in some regions) motorcycle club members
- College bars, usually located in or near universities, where most of the patrons are students.
- Neighbourhood bars, a bar that most of the patrons know each other; it is generally close to home and is frequented regularly
- Cop bars, where off-duty law enforcement agents gather
- Gay bars, where gay men or women dance and socialize
- Mixed gay/straight bars
- Singles bars where (mostly) unmarried people of both sexes can meet and socialize
- Women's bars

1.6 Bar stock – alcohol & non alcoholic beverages Setting of a cocktail bar

Cocktail Bar may not be the fine dining restaurant initially expected from Black Hoof owner Jen Agg but it does deliver the well-crafted cocktails of which she has become famous, as well as a laid-back, speakeasy vibe that seems perfect for Dundas West.

Part of that underground cocktail lounge atmosphere comes from Cocktail Bar's sidewalk discretion. No, it doesn't have a back alley entrance like Goodnight, but its exterior is totally ambiguous, save for a small "Cocktail Bar" sign in the window. So hungry carnivores jonesing for some blood sausage and wandering aimlessly by the former home of Hoof Cafe may have been slow to notice the space reopen as Cocktail Bar about a month and a half ago.
When Hoof Cafe closed last spring, the plan was to open Black Hoof and Company (BHCO), a tasting-based fine dining restaurant in its stead. But the plan never materialized and Agg later parted ways with former Black Hoof co-owner and chef Grant van Gameren. Now, Cocktail Bar is quickly becoming known on the scene, especially for what's on--or rather--what isn't on its menu.

"The problem with vodka is that it's dumb," Agg writes in a February blog post. "It is not special or time consuming, has nothing to do with terroir and doesn't wear the character of its maker in subtleties of flavour."
I wish Agg was at Cocktail Bar when I stop in so I can ask her more about the favourite spirit of buzz-seeking teenagers, but since she's out of town, all I can do is scan Cocktail Bar's menu.

The bar offers classic white and brown cocktails, as well as craft beers (bottles) from local brewers. Among the signatures are Cocktail Bar's 3oz Manhattan made with house made bitters ($16), and its 2½ oz martini (gin, obviously) for $11.

Though Cocktail Bar doesn't look dramatically different from when the space was Hoof Cafe (same layout, bar stools, lighting, and the same tin roof--though really, why would you want to change that?), it has a decidedly different vibe. Maybe it's the absence of the printed wallpaper, or the smooth '30s and '40s jazz (which sounds like Ella Fitzgerald, but the bartender tells me is not), that makes it feel very throwback and cool. And the candles in mason jars seem to work so much better with cocktails rather than brunch.

But since the Cocktail Bar's food options are limited just to cheese plates, patrons looking to pair their Negroni with some pork belly pastrami should probably head down the street.

1.7 Opening and closing duties of bar

The duty of the opening bartender is to ensure the bar is set up properly by opening time with or without the assistance of a bar back. During the shift a bartender should be able to work without running out of any essential supplies such as beer, wine, liquor, juices, glassware, garnishes, etc. Correct and proper set up is essential to delivering efficient service. There should be enough mise en place for the next shift, which means the opening bartender should continue to prep throughout their shift. The opening checklist must be followed and signed off on by both the bartender and manager. Management will also provide a Daily Prep List to ensure everything is stocked to the proper par levels. All team members are expected to work neatly, keeping their work area clean and organized. More importantly, team members are expected to work as a team.

While everyone has their designated job functions they are not limited to these responsibilities alone. Team work is the only true way to operate a successful establishment. Shouting or yelling is never an acceptable form of communication; remember everyone is invested in the success of the restaurant so help each other wherever and whenever possible. Stations should be broken down and closed as business begins to decline leaving the most productive station for last. Make sure that closing a station is done in a discreet and quiet manner so as not to impede on the dining experience of any remaining guests. The closing bartender must leave the bar and liquor storage areas clean, restocked and well organized ensuring the opening bartender is set and ready to succeed the following morning. Any duties assigned on the cleaning schedule should be fully completed and just as for opening, there is a closing checklist that must be followed and signed off by both the closing bartender and manager.

Bar Sanitation

Sanitation and Hygiene in beverage service operations are two very important considerations from the point of view of customer health and customer appeal. The local health authorities hold all the rights to impose fine or even suspend licenses or permits to sell alcoholic beverages if Hygiene and Sanitation conditions maintained are not as per the provisions of the license or permit.

Bar sanitation and hygiene may vary due to number of reasons:

1. Employment of casual staff in this area who do not have any formal training in handling bar operations
2. Less supervision by Public Health Department officials due to odd working hours.
3. Compromise with standards during busy business period with no provision for adequate staff.
4. Ignorance on the part of management or the staff.

The food Hygiene regulations set by the local municipal bodies or as per local liquor control laws have provisions which managements should not ignore. These regulations may vary from place to place or region to region, they try to ensure certain level of hygiene and sanitation standards are always maintained by the Beverage Operations.

Particular attention should be given to:

1. Avoidance of contamination through smoking when handling drink or food.
2. Adequate glass washing facility ensuring the equipment is thoroughly cleaned and sanitized before it is reused for service.
3. Dealing with spillage to avoid contamination.
4. Correct use of material to bar design to facilitate easy cleaning.

The bar staff must be particularly careful and knowledgeable about the following category of sanitation:

Physical sanitation:-

If a bartender chips a glass while scooping ice he or she must be sure to pitch the glass and replace the ice. All used bottles, garnishes, coasters, straws, cigarette ash or buds, matchsticks, paper napkins etc should be removed and disposed as per the house rules.

Chemical sanitation

Issues include things like ensuring cleaning supplies are not stored near drink mixes.

Biological sanitation

It is mostly a concern when bartenders are washing glasses or washing mixing tools. 'It is better to let the dishes air dry than to use a potentially contaminated towel. Glassware should be sanitized, equipments cleaned before use, bottles must be wiped off any dust prior to opening: wiping up of spillages etc.

Materials and Finishes: Front Bars (Bar counters) must be backed with fiberglass reinforced plastic panels (FRP), and be professionally trimmed. Bar tops may be of any smooth, cleanable, material.

Back bars may be made of the same materials **provided** no food equipment or open beverages are stored on or in back bar, with the exception of un-opened liquor bottles.

Equipment Counters, including bar-tops, back-bars with equipment, drink and food preparation counters, scupper rails, must be stainless, corian-like, granite, or other approved food-contact material.

Wood and wood composite understructure may only be used in customer interface areas, such as bars, bar-backs, not involved in' "raw to cooked; food preparation or in high-moisture environments, where only **minor** food storage or preparation are conducted.

Minor food storage would include the storage of small amounts of pre-packaged beverages, or commercially-packaged non-hazardous foods. Minor preparation may include slicing fruit garnishes, pouring from liquor bottles, and similar activities.

Any areas used for the storage and preparation of liquid products must have:

a) A solid surface counter-top with a radiused backsplash (or other approved cleanable angle treatment) such as stainless steel, granite, corian-like or similar material approved for food contact. Exposed wood understructure must be sealed with a cleanable surface treatment such as Formica; melamine, water-based epoxy, or oil-based enamel paint.

b) If only a portion of the counter is capped in stainless steel (such as under an espresso machine or soda tower), the stainless steel cap must extend at least six inches to the sides of the unit, and cover all of the counter to the front and rear of the equipment, including front bull nose and rear back splash.

c) Additionally, any areas used for open preparation of liquids such as a single granite machines, soda tower, espresso machines, beer or wine taps with scupper drains, the understructure must have the exposed wood completely covered using stainless steel, fiber reinforced plastic (FRP) material, or other approved material with cleanable angle treatments, sealed seams, and sealed equipment, hose, and pipe penetrations.

d) Ares with multiple machines and / or equipment with supply arid waste line penetrations, and / or in situations where heavy use is made of any of the locations cited above when that use involves numerous plumbing supply and waste penetrations, the 'all metal understructure" standard must be enforced.

Ware-Washing:

Sinks: A three:-compartment sink with integral double drain-boards is required for drink establishments. A dish or glass washer cannot be a substitute for a three- compartment sink. Three compartment sinks must have tubs of equal size, with two distinct and equal size integral drain boards, of a size equal to each tub or larger. Sink tubs must be sized to allow for the immersion of the largest kitchenware to be washed.

Dishwashers and glass washers must have both a "dirty" and "clean" side drain- board landing of adequate size and a pre-wash dump sink, but need not be integral to the dish or glass washer. All dish tables and drain boards must drain to sewer.

A bar **must** have a three-compartment sink .sized for its needs, If an establishment has both a restaurant and a bar, both of which are under the same ownership, then the three-compartment sink of the restaurant may be used for the bar if:

a. The three-compartment sink ,is within 200 feet of the bar;

b. The transport pathway is inside the building and on the same floor;

c. The bar and kitchen have the same permit holder;

d. The bar is provided a glass-washer installed in lieu of the required three-compartment sink. The glass-washer will accept all small wares in use at the bar. A two compartment or one compartment sink may be approved by the Health Authority for purposes **other** than dishwashing (dump-sink). All sinks, with the exception of hand sinks and mop (janitor's) sinks must be **indirectly** connected to a floor sink with an approved air-gap. Hand sinks and mop (janitor's) sinks may be directly drained to an approved sewer.

Hand Sinks: A bar must have at least one hand-washing station. All hand sinks must be wall-mounted, separate and distinct, and be at least 18 inches from food preparation or utensil storage surfaces. Splash guards must be used if the space available is inadequate to allow for separation.

Dump Sinks: A dump sink is not a required item, but would be of great benefit to reduce "double'-duty" use of the three compartment sink. Hand sinks may not be used as dump sinks.

Mop Sinks: A mop sink, accessible to bar personnel, must be available for use. The mop sink should not be installed directly behind the bar.

Drink-pouring Stations and Jockey Boxes: All bars mixing open drinks must have a properly constructed pour station and/ or jockey box. Jockey boxes must have built-in cold plates. Counters above jockey boxes must have scupper rails made of stainless steel, properly drained, that extent at least the width of the jockey box. High volume bars, such as those serving large gaming floors, may be required to install full- counter scupper rails.

Refrigeration: All refrigerators must confirm to minimum conditions of Safety, hygiene and Sanitation standards, BSI certified or equivalent. In addition to "beer boxes' that are generally labeled either "This equipment is -intended for the storage and display of packaged products only" or "This equipment is intended for the storage and display of non-potentially hazardous, bottled or packaged products only".

Each bar must have at least one general standard refrigerator to store open products.

Lighting: Regulations require a minimum of 50 foot/candles of light measured at "...all surfaces used for preparing food and at work levels used to wash equipment or utensils..." A bar may be required to install under-counter lighting so that the drink/food preparation arid ware-washing lighting requirements are met, while limiting the effect on the bar "atmosphere." These lighting fixtures are required to have adequate bulb shielding.

1.8 Question

1. Write about the Production of Alcohol.
2. What is the Bar organization and profiling of jobs
3. Write a short note Bar stock.
4. Write a short note on the Opening and closing duties of bar

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UNIT 2

The Bar Design, Layout and Bar Operations

Structure

2.0 Objectives

The student shall be able to understand:

1. Basic Bar layouts and various elements of bar designing.
2. Analyse the design and space need of a Bar.
3. The basic equipment and their use.
4. The role of Bartender and

2.1 Introduction

The drinking of alcoholic beverages is as old as human history and accepted as an essential part of everyday life in many cultures over time immemorial. Serving drinks for profit is as old a concept as making profits itself. Consuming Alcohol during celebrations and social events has been observed through ages. Due to advent in travel, pouring tor profits developed hand in hand

with increasing travel trade. Taverns, in Greek and Roman -cities, served drink along with food and entertainment to travelers.

A **bar** (also called a pub or tavern) is a business that serves drinks, especially alcoholic beverages such as beer, liquor, and mixed drinks, tor consumption on the premises. Bars provide stools or chairs for the patrons along tables or raised counters. Some bars have entertainment on a stage, such as a live band, comedians, go-go dancers, a floor show Bars that are part of hotels are sometimes called long bars or hotel lounges.

People are increasingly enjoying socializing over a good drink. Suggestive selling is motivating people to try new combinations or drinks and people are willing to pay for the quality high priced product. The unit deals with aspects related to setup of Beverage operation and service involved therein. Today bartending may not be realized without use of specialised equipments which n9t only bring lot of convenience but also satisfy the hygiene and sanitation regulations of local authorities. The unit will deal with various equipments requires in the Bar operation.

2.2 Bar Layout

The first step to think through layout of bar is to ensure that it takes into account customers atmosphere, service and efficiency. Providing a functional space for the employees in which they can perform accurately and quickly is a continuous challenge to the designer the routine work at bar includes taking orders for beverages, mixing and garnishing drinks, wash and sanitize glassware, handle revenues, restock bar supplies with minimum efforts and maximum productivity. At the same time, it has to be kept attractive, clean and hygienic, makes the customer feel comfortable, blends well with the interiors and theme and stimulates beverage sales. Consequently some strategic decisions must be taken to fit in the design within the stipulated budgets.

Bar designs, today, are a subject of changing lifestyle and trends in fashion customers want elegance and are ready to pay for the same. The designing includes all relevant areas refurbished in terms of wood or marble and rich fabric to achieve a feeling of intimacy and comfort. Restaurant type bars try to incorporate simplicity and elegance through elegant wood work, marble tops for the counters and tables, overstuffed chairs which makes the seating comfortable as well as classy. Concept bars, a modern trend, tends to take the customer, into a exotic locale, which otherwise is not generally experience by the customer. Increasingly customers are willing to be a part of the action whether the are playing pool, enjoying video games or stage performances and so bats are increasingly Participative. One of the most frequented beverage operations are the night club where the trend is towards use of lighter colors, increased space for people to sit and talk if they wish not to dance, increased eye contact between people.

2.1.1 Basic Elements of Design

1) Available space

The amount of space available for the desired layout includes Square footage area, shape of the room, entry and exit points, Sharing space with dinning areas and provision for entertainment.

- The square footage will limit the numbers of customers one can serve at any given time. This also determines the seating plan in the bar.
- The shape of the room determines tile arrangement of fixtures and placement of furniture. Shape of the room affects the position of the bar for best visual and Psychological impact, shape and size, number and arrangement of the tables. Shape will also influence the movement of the guest and available space for entertainment.
- The entrance arid exit of the bar determines the movement pattern and the way the place will get filled up. Care has to be taken to ensure crowding does not take place at the entrance leaving the room beyond it empty. Whether the customer is required to stop at the bar or head towards the seating, would be determined by the entrance of the bar.
- Sharing space with other activities will require careful planning. Amount of space required for each activity will have to be considered- furniture and fixtures, bar, dance floors, stage area for performers etc.

2) Activities and Traffic patterns

Movement of customers in the room is an important consideration. In addition to service, accommodating dinners, customers enjoying live entertainment, customers moving towards the bar itself, visits to restrooms, or telephones must be accounted for so .that placement of fixtures ensures maximum efficiency. The layout must ensure orderly flow from bar counter towards the guest tables and back, to and from kitchens, service areas for dinning service and entry/ exit from the service areas. The ambiance, the mood arid the clientele will often influence the bar layout. For instance, cocktail lounge might require an island setup enabling customers to go round the bar.

3) Furniture

Furniture chosen should compliment the interior decor and the theme. Bar stools, tables, chairs should be related to the total bar concept they must be inviting and comfortable Bar stools must be 30 inches above the ground allowing the guest to pull himself comfortably to the bar. It should be comfortable with, a back, Upholstery that looks good, suitable footrest height, arms and with a seat that revolves around itself. The size and shape of the tables used in the bar are of importance in the layouts.

4) Licensing restrictions

Most or the states and governing authorities make compliance of, certain requirements mandatory for grant of license to sell alcoholic beverages. Most prohibit Open bars and some make it mandatory to have a separate area within the restaurant for service of liquor. Local health

and fire regulations, too, influence the layouts, There should be provision for wash rooms for the customers which might have a bearing on the layouts.

Plumbing is an important consideration in layouts of the bar. The drains and supply pipes should not travel long distances and should be coordinated well with the kitchen, since installations are very expensive. Careful thought should be given to the electrification as well. Apart from creating the right mood and enhancing desired interior to meet desired -theme, special electrical connections may be required for various bar equipments. Further electrical supply may also be needed for stage and various electrical instruments, for live entertainment. Heat and air-conditioning ducts and vents, air circulators and water sprinkler systems are important issues in layouts in the form of outputs, space occupied and visual effects.

Determining the size, shape and. placement of the, bar itself can be a twofold problem involving Function and Decor. The shape, size and design of the bar should be designed by a team comprising of the owner, architect and the interior designer. Work areas could be designed with the help of equipment supplier or by the facility planner. Modular bar designs are available and may have some built in advantages. These models are fitted with electrical points, supply and drain fitments, easy to maintain and upgrade if necessary, It is practical to consider the volume of business or level of activity during trading .periods to ascertain the size and shapes of the bar. Projected, volume of drinks that will be served, space and equipment needed to meet the demand should be considered before Investments are done.

Checklist For Bar Design Essentials

Following are the important points to be considered before the subject of designing bar is taken up for discussions with interior designers or the facility planners.

* Target Clientele, level of service to be offered.
* Concept of operation, competition.
* Estimated volume of business.
* Types of beverages on offer.
* Size and shape of the Bar area, activities undertaken in the bar area.
* Relationship of bar to dinning areas and service area.
* Decor, equipment furniture and fixtures planned in the bar area.
* Licensing regulations, health, fire and building code requirements.
* Time and budget limitations.

2.3 Basic Bar Arrangement

To determine the size, shape and placement of the Bar, two issues need to be carefully studied-decor and function. In actual practice, the Bar layout possibilities are limited by available space and the budget. Use of Modular Bar designs is increasingly being practiced. These Bars have some advantages over "make to specification" Bars. The Modular Bars are fitted with plumbing and electrical fitments and can be updated in case so desired. One must not commit the mistake of assigning area for the Bar without ascertaining the number of drinks that will be served and the provision for equipments required for meeting the demand or volume. A poorly designed bar will be frustrating, limit sales and consequently profits.

2.2.1 Parts of Bar

A bar is made up of three parts: The Front Bar, The under Bar and The Back Bar. Each part has an important role to play in the efficient functioning of Bar.

The Front bar

This is the guest area where they will place order for their drink and will receive their orders. The surface of front bat will be alcohol proof usually of laminated plastic. The front bar is typically 18 inches wide with a cushioned armrest which might add another 6 -8 inches to its width. Few inches of the back edge are recessed for the barman to pour his drinks called drip rail, glass rail, spill trough or simply rail.

Bar die is the vertical piece of bar that separated the guest area and the barmen's working area shielding the under bar from public view. A footrest will run along the entire Bar die about a feet above the surface, for the guest to rest his feet when seating on the bar stool. The front bar is generally 42 inches in height which-is comfortable working height for most bartenders. This height enables a customer to lean against the front oar with one foot on the, foot 'rest. The height also helps place all under bar equipment away from the view of customers. The front surface, **Bar die, Foot rest** and the **Bar stools** are a reflection of establishment and hence -must be very carefully planned.

The Under Bar

The all important part of the functional bar, it is placed under the front bar where most of the equipments, tools, ingredients, garnishes, pourers, optics and supplies will be arranged for efficient service. Customer's preferences, their demographics; sanitation, ease of preparing drinks, judicious use of the space contribute to planning of Underbars.

The pouring station must have adequate supply of ice, liquor, mixes, glassware, garnishes and blenders at arms reach. Most Underbars have a condiment and garnish tray sunk into the ice chest so that the fresh garnishes are kept fresh for a longer period.

Underbars may also have automated dispensing systems for carbonated beverages. This system has pipes or lines running from bulk supply to dispensing head. Together it constitutes a Cobra gun.

The number of her of pouring stations on the bar depends upon the volume of business and the number of drinks served at busy hours. It should be designed to handle orders at peak period, with the equipment needed to it. Pickup station, a part of front bar, allows, the waiting staff of dinning areas to pickup their orders and return empty glassware. The pickup station must be away from customers seating area to avoid accidents and embarrassing moments during service.

Another important area of the Under bat is the glass washing equipment- a two or three sink unit with drain board or a automated dishwasher. The Under bar must have provision for Waste disposal, as per the requirements of the Health department.

It is customary to have three feet distance between the Back bar and the under bar to provide for barman's movement and .opening of cabinets etc; Cabinet doors should not be broad enough to block the passage of staff. Careful thought must be given to the drink Menu before designing the under bar space. Most bars serving draught bees will have draught beer engines installed in the under bar with special provision for chilling, the beer kegs.

An essential factor to be considered in under bar and back bar designs is the electrical and plumbing needs of the equipment. Icemakers, dishwashers, cobra guns need water supply. Sinks, dishwashers, refrigerators, Glass frosters, ice bins, icemakers and waste bins will require Proper drainage .systems. Some of these equipments might require special electrical connections as well.

The Back Bar

The back bar acts as a decorative display as well as a hard wearing storage space. It is regarded as the soul of the bar and speaks a lot about bar operation. It reflects the image of the operation and gives an idea of the kind of beverages the customers may enjoy; Back bars are' effectively and efficiently used to display equipment and wares, display information about important events, cocktails and wines of the day, new arrivals (wines, spirits or liqueurs) and to stimulate conversations. It is important to remember that displays must compliment and enhance the theme or the decor of the operation.

The Liquor Shelves are four inches deep and fifteen to eighteen inches tall to accommodate different types and sizes of the liquor bottle. It may also be common to find a television set at the back bar for the customers to be entertained with music or a sports event. There will be a provision for a jukebox, in case no centralized music system is in operation, to play guest choicest numbers or requests.

Some important tips to maintain back bar are:

- Keep labels of the bottles towards the customer. Replace bottles with torn labels with intact ones.
- Group the beverages by' category- cognac with cognac, bourbon with bourbons, all white rums together etc. Remove non performing brands from back bar.

- Highlight special selections; use multiple facings of premium spirits when possible.
- Use lighting to under lit glass shelf and spot lights to highlight the back bar.
- Keep the Back bar clean. Keep all the bottles and decorative articles clean at all times.

The Bar Floor

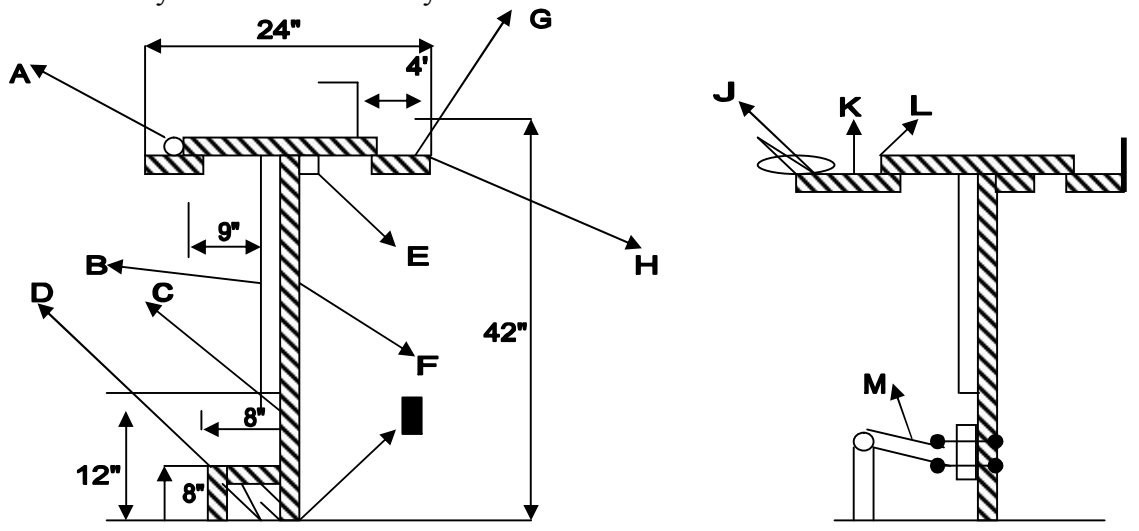
Floor must ensure Bartenders safety and comforts. The flooring is of importance and requires consideration because the staff has to be on their feet and standing for long periods. The floor must be non porous- tile or sealed concrete- to meet sanitary requirements. Wood and carets may not be very suitable while rubber mats or plastic mats may prove to be antiskid surfaces but will call for frequent cleaning.

2.2.3 Bar Design

The design of the bar area is very important. Figure shows one possible layout/ possible design for combination public & service bar as well as the placement of equipment in it, Professional bar tender & server know that the bar design & available equipment affect there productivity & performance, which, in turn, affect service to a guest. Thus, when bar area are designed, those responsible should consider the sequence of the activity necessary to prepare drinks, properly locate equipment required for these tasks, design work stations so that employees can share expensive & or space-consuming equipments & provide ample space for drinks that are ready to be picked up.

A server working from this has ample room to place a serving tray on the pickup area in fact several servers who will need drinks at the same time would be able to place their trays in area. The layout also allows the service staff to perform several production task (e.g. placing ice in glasses, adding garnishes, filling glasses with soda).

Note: that one electronic data machine is behind the bar while a second one is located near where the bar tender prepares/ provides drink to servers; these locations will help make this bar's sales income control system work efficiently.



STANDARD BAR DETAILS

- **A-** Arm rest-typical wood shape shown-many styles available including finishes
- **B-** Decorative finish – wood panel, tongue & groove board, carpet, upholstery, ceramic tile, you name it, they have it.
- **C-** Kick plate-linoleum, Formica, etc.
- **D-** Foot rest-linoleum, slate, hard wood. etc.
- **E-** Cleat-for securing top to die, varies by manufactures.
- **F-** Liquor gutter-usually constricted as shown, May be formed in one piece mahogany bar top.
- **H-** Water shop-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. Many style available.
- **K-** Extension bar- brass or black iron
- **L-** Water stop-same as "I"
- **M-** Brass foot rest-rail usually 2" dia. Swing away support to floor optional check thickness of brass rail your supplier proposes. They are rather expensive.

Some key point:

- Dark colored flooring is most suitable for dining & service areas.
- Flooring should be hard wearing safe in terms of being water & fire proof at the same time decorative.
- Walls & & ceilings should be acoustical materials to absorb any unwanted sounds & make eating environment peaceful & enjoyable.
- Furniture & fittings should be of fire proof materials, durable, hardwearing & noiseless.
- As far as possible window should not occupy more than 20% of floor area.
- Doors should be self-closing.
- Ensure ease of maintenance. In addition, the pulling & pushing of chairs & table while cleaning floors, not forgetting the dropping of sharp knives & other cutlery by customers & servers alike. Any worn out parts should be easy to replace.
- All structures should provide smooth flow of work & people through them, so that accidents are prevented & the areas are rendered safe for all using them.
- Ensure an atmosphere of comfort & pleasure.
- Space allotment must bear in mind the need of change layout for service & dining areas because changing demand of customers, their ages & body sizes. **Flexibility is therefore, the essence of good allocation.**

2.4 Equipment

2.3.1 Under Bar and Back Bar Equipment

Major pieces of under bar and Back bar equipments are made up of stainless steel for the purpose of ease of cleaning, Hygiene and durability. Stainless steel is resistant chemically to most of the

cleaning 'solutions used in the commercial operations. Work surfaces supporting the under bar equipment are a standard 30 inches high with a depth of 16 inches to the rear. Each equipment stands on legs 6 inches high, for access to plumbing and ease of cleaning.

Equipment for Mixing Drinks:

Pouring stations have following notable equipment-

1. **Ice bins (Ice chest):-** This is the centre piece of any pouring station with speed rail attached in the front with or without bottle wells. The unit is also called cocktail station, jockey box or beverage centre. It has a 30 inch ice bin with sliding cover. The front of the unit has a 3.5 feet bottle or speed rail. On the1eithand side of the ice bin condiment tray is placed which holds the garnish cups embedded into the ice bin to keep the garnished fresh. On the right side is place for blender and mixer with a special dump sink. A hand towel holder and shelf complete the station.

2. **Speed rail:-** This is a 3.5 feet extension in front of cocktail unit containing most frequently poured brads of various liquors collectively called **well.** The brands used here "are called House brands or pouring brands (brand poured by bartender when drink is ordered by type. Brands requested by the customers frequently by their names-call brands, are also kept handy.

3. **Cobra gun /Handgun/Six-shooter:-** This equipment is used for dispensing carbonated beverages or mixes like soda, tonic water, soft drinks etc. It consists of a head with a nozzle and pushbuttons that deliver the carbonated mix. The post mix systems have bulk supply concentrated syrups and a tank of carbon dioxide under pressure. Pipes carrying syrups run from each supply point to under bar and to bottom of each ice chest through a cold plate. The, carbon dioxide line goes to a carbonator where carbon dioxide gas is mixed with filtered water and the mix is passed through the chilling plate to bottom of ice chest, All the pipes carrying the syrups or the carbon mix run to the head of the gun trough flexible hose.

4. **Mixers and Blenders:-** Shake mixtures or spindle mixtures, as they are called, in bar, Mixer is made up of a deep metal or food grade plastic cup with a pull down shaft to agitate the contents of the cup. It is used for cocktails made from immiscible ingredients that do not blend easily with spirits. Blenders have a blade attached at the base of the cup which Can grind, puree and mix ingredients which otherwise do not readily mix with each other. Banana daiquiris or frozen margaritas can be made using these blenders. Many bars may have both the equipments. Blenders will have variable speed controls and flexibility to use more than two types of blades.

5. **Glassware: -** These are the equipments in which prepared drinks are served. These may be stemware, tumblers, footed ware or mugs arranged on the glass shelves allowing air circulation less the glass develop typical flavors. Glasses are often needed to be chilled in

a Glass Froster, a top opening freezer that chills the glass at 0 degrees Fahrenheit, which gives a refreshing coat of frost.

6. **Automated pouring Systems: -** Automats are available for Beer, Wine, Liquor and Juices. A number of Beverage service operations are using these automatic dispensing systems for convenience and increase output. These electronic pouring systems dispense a preset amount of beverage and account for the same automatically. Some of these systems use a handgun with a flex hose similar to a soda gun. Push buttons activate the flow of beverage from bottles hung upside down in the store behind the bar. Pre set amount of beverage, is poured and the record. maintained. The size of the drink can be regulated as per choice..

Bar Sinks and Glasswashers

Equipment for washing typically includes following items:

1. **Sink: -** Most bars may have a three sink glass washer with a drain board as a single piece near the pouring' station. The compartments are for washing, rinsing and sanitizing respectively. Each compartment is about 10 inches wide and about 14 inches from front to back with a depth of about 11 inches. Drain boards are about a feet long on one or both the sides.

2. **Special glass washing Brushes:-** These brushes standup to the soap solution and can be manual as well as motorized. The glass is kept on the centre brush and when electrically activated will cause the bristles to spin cleaning the glass and the rim thoroughly. In the manual version the glass is simply rotated over the brush by hand, passed into rinse sink, sanitizing sink and to the drain board, upside down to air dry, Alternatively, use of automated glass washers is gaining popularity.

3. **Automatic glass washer: -** A glass washer is a small machine that fit neatly under the under bar. It washes and rinses glass, provides a final high temperature rinse to sanities the glass ware and blow dries them. The wash 1emperature is about 150 degree Fahrenheit for quick drying. Labour saying and increased sanitation conditions arc reasons for its increasing popularity.

4. **Waste dump:-** Usually placed on the servers side, it is a receptacle for collecting dirty glass dump and debris, thrash cans, waste paper and ashtray thrash.

Ice Machine/ice Maker

This is an important piece of equipment that provides ice to the bar and other related operations. It is very essential to decide what shape and size of ice cubes is intended to be used. The clientele, their profile, Menu, Glassware Types of pour and service all determine type of ice maker one would need.

Storage Equipment

A bartender will require enough storage space for 1iquor bottles, various types of mixes, cocktail drinks, wines, beer, garnishes, miscellaneous supply like cocktail napkins, stirrer sticks, straws, toothpicks, wine cradles, etc. which will constitute or form a part of Back bar.

3.3.2 Bar Tools and Small Equipment

In order to carry out the service of all forms of drink requested by the guest efficiently the bartender should have all the necessary equipment for making of mixed drinks, serving Wines, decanting wines or serving straight drinks. Bartenders will usually prefer to have a selection of tools for saving time and space. Stainless steel is the metal of choice Tor bar tools and small equipments. It is durable, hygienic, good in appearance, and easy to clean.

Bar tools and small equipments are of three types as follows:

Small ware for Mixing and Pouring

1) **Jiggers: -** These are bartending tool used to measure liquor. It is named for the unit of liquid it typically measures. A traditional style of jigger is made of stainless steel with two opposing cones in an hourglass shape on the end of a rod. A typical 'jigger' measures 60ml on the larger side, and 30ml on the smaller side. The heavy glass jiggers has a plain or elevated base and comes in several sizes- I FI oz to 3FI oz. these may also be used as shot glass. The beverage to be measured and poured out is filled upto the line or mark as against upto the brim in a steel or EPNS jigger.

2) **Pourers: -** Pourers are tools to measure liquor. These tools have a bulbous front end and a narrow tube at the rear end that ends up into the bottle. When the bottle is inverted, the bulb receives a definite amount of liquor and pours in into the service glass. These could be made up of steel or plastic.

3) **Mixing Glass: -** A glass jug without a handle, having a lip, used for mixing clear drinks which do not contain cream or juices.

4) **Cocktail shaker: -** A three part utensil, it is ideal for mixing ingredients that will not normally blend together by stirring. There are three varieties of cocktail shakers: The Boston Shaker, The French Shaker and The Cobbler Shaker.

5) Bar strainer: - A cocktail strainer is a metal bar accessory used to remove ice from a mixed drink after it has been shaken or stirred and while it is being poured into the glass it will be served in. Strainers are used to cover the mouth of the glass a drink was stirred in or part of the cocktail shaker that it was shaken in. They have holes or slits small enough that only liquid can be poured out. There are two main types of strainers. The Hawthorn strainer is flat and circular with a handle and several flat stabilizing prongs coming out of the rim. It has a metal spring around its rim that will roll inward slightly to

fit inside a glass. The circular rim of the strainer need not be touching the rim of the glass, as the spring inside will filter out the ice. The Julep strainer is concave and circular with a handle. and will fit tightly into a mixing glass when on an angle. The concave part of the strainer is perforated with several dozen small holes.

6) **Bar spoon: -** A bar spoon is a long handled spoon used in bartending for mixing and layering of both alcoholic and non-alcoholic mixed drinks. Its length ensures that it can reach to bottom of the tallest jug or tumbler to mix ingredients directly in the glass. A bar spoon holds about 5 milliliters of liquid (the same as a conventional teaspoon). Its long handle is similar to an iced tea spoon but is usually decorative and elegant.

7) **Ice scoop: -** A tool used for removing ice cubes from the Ice bin. These should be preferably plastic to avoid contamination through ice.

8) **Ice tongs: -** A lifting .tool with a U shaped handle terminating into serrated grip. Used to pick ice cube during service for addition to glass by the table.

9) **Muddler: -** A muddler is a bartender's tool, used to "muddle" or make a mash of fruits, herbs, and/or spices in the bottom of a glass to release their flavor.

10) **Fruit squeezer: -** a tool used for extracting juice from citrus fruits like lemon. The tool has perforated lower section that removes all the pith, pips or fiber released during extraction of juice.

11) **Funnel: -** A funnel is a pipe with a wide, often conical mouth and a narrow stem. It is used to channel liquid or tine-grained substances into containers with a small opening. These are ysed to avoide spill age while transfering liquid contents from one glassware to another Funnels are usually made of stainless steel, glass, or plastic.

12) **Glass rimmer: -** A glass rimmer is a bar accessory used to apply salt or sugar to the rim of a glass. It usually consists of one or more shallow plastic discs that the glass is turned upside down into. The discs can be ruled with either the rimming salt or sugar, or sometimes something to moisten the rim of the glass like lime ,juice

Equipment for Garnishing

Bartenders usually setup the fruits and other foods used to enhance or garnish drinks. These are typically placed into a condiment tray often. mounted on the underbar. Flexible plastic condiment trays are also good choice for use. Tools for preparation of condiments are-

1) Cutting board: - A rectangular piece of tool used as a base for culling and preparing garnishes. Generally made of food grade plastic.

2) Bar knife: - A knife used by bartenders for culling and preparing garnishes.

3) Relish fork: - Relish fork is a tool consisting of a handle with two narrow lines on one end. The fork as a bartending tool, has a long handle so as to pick desired garnishes or cocktail onions from a tall jar on straight to tines. Some versions come with a small blade, lateral to tines, which when pressed from the top end, helps to release the garnish. Not used for eating purpose in restaurants.

4) Peelers: - A peeler is a metal blade attached to a metal, plastic or wooden handle that is used for peeling fruits which may be used as a garnish.

5) Zesters: -: A **zester** is a utensil for obtaining the zest from lemons and other citrus fruit.

Equipment for Service

1) Bottle openers and can openers: - A bottle opener is a device that enables the removal of metal 'bottle caps from bottles. More generally. it might be thought to include corkscrews used to remove cork or plastic stoppers from wine bottles. Another name for some types of bottle opener is church key. A metal bottle cap is affixed to the rim of the neck of a bottle by being pleated or ruffled around the rim. A bottle opener is a specialised lever inserted beneath the pleated metalwork, which uses a point on the bottle cap as a fulcrum on which to pivot

2) Corkscrew: - A corkscrew is a tool for drawing stopping corks from wine bottles. Generally, it comprises a pointed metallic helix attached to a handle. The user grips the handle and screws the metal point through the cork, entwining the cork and corkscrew so that moving one moves the other. Corkscrews are necessary because corks themselves, being small and smooth, are difficult to grip and remove. The handle of the corkscrew, often a horizontal of wood attached to the screw, allows for a fine, commanding grip making removal of the stopper relatively easy. Many corkscrew handles incorporate levers that further increase the amount of force that can be applied outwards upon the cork.

3) Swizzle sticks: - these are small sticks placed in cocktails to hold fruit, or merely to stir the drink. Commonly made of plastic, the origin of the name is uncertain but run drinks made with sugar and citrus juices have been called swizzles since at least the 19th century

4) Bound service tray: - These are round trays used for carrying glasses, wine bottles and decanters for service. The material is anti-skid and provides grip to glassware while carrying it.

5) Glassware: - Most glass drinking vessels are either tumblers- flat-bottomed glasses with no handle, Footed glasses- which have a bowl above a flat base but no stem. Stemware- which have a bowl on a stem above a flat base and Mugs

Following are the common glasses most widely used in the beverage operation:

a) Collins- the glass is used for long drink -e.g. Mint julep, girl and tonic.

b) Flute-ideal glassware for champagne for it encourages prolonged stream of bubbles.

c) Saucer-ideally used for short mixed drinks like Daiquiri or Sours

d) Highball- this is used for long drinks, fruity cocktails or Bloody Mary.

e) Martini-glass for short mixed drinks like martini and manhattans. These should be used cold holding them by stem less the drink will heat up.

f) Old-fashioned- used for Whiskey and Soda

g) Short glass- Small glasses used for small shorts of hard stuff intended to be drunk quickly, Vodka or Tequila, can be used as measures

h) Wine-These are wide mouthed goblets allowing wines to breathe to release aroma and also allowing to swirl the wine to appreciate color.

2.5 Accessories

Mixing glass- A glass jug without a handle, having a lip, used for mixing clear drinks which do not contain cream or juices.

Strainer- To ensure that no bits of ice or pips end up in the drink.

Measuring spoons- To gauge those vital small additions like sugar, salt, syrups or even Liqueurs.

Measure - These are bartending tool used to measure liquor. Various combinations are Available.

Ice bucket- Containers to hold ice cubes during service. These could be Steel or fiber, open or with the lids.

Ice scoop - Used for removing ice from the ice chest. It may be metallic or plastic.

Chopping board- For chopping up fruits, herbs and other garnishes

Sharp knife- Preparing garnishes

Cocktail sticks- For securing olives, onions, cherries and other fruits.

Swizzle sticks- Stirring .long drinks

Ice tongs- To pick up ice.

2.6 Summary

Bar designs, today, are a subject of changing lifestyle and trends in fashion. customers want elegance and are ready to pay for the same. Since beverages contribute more towards revenues, its planning and designing must be done with utmost care. Bar designing, gets influenced by Space for bar operation, activities and traffic patterns, placement of furniture, plumbing considerations and legal regulations. Determining the size, shape and placement of the bar itself can be a twofold problem involving Function and Decor. The shape, size and design of the bar should be designed by a team 'comprising of the owner, architect and the interior designer. To determine the size, shape and placement of the Bar, two issues need to be carefully studied-decor and function. In actual practice, the Bar layout possibilities are limited by available space and the budget. Use of Modular Bar designs is increasingly being practiced. These Bars have some advantages over "make to spccit1cation" Bars. Equipments play an important role in the success of beverage operations. The selection of equipments should be governed by the nature of operations and the volume of business. The equipment must also justify the drink menu offered in the operations.

Sanitation and Hygiene in beverage service operations are two very important considerations from the point of view of customer health and customer appeal. Although sanitation standards may vary from operation to operations.

2.7 Self Assessment Test

1. What are the essential elements of bar design? Why Decor and Functional aspect important in bar designing?
2. Why hygiene and sanitation important in the beverage operations?
3. Enumerate the role of Bartender in the success of beverage operations.
4. What is Mixology? List all the essential equipments requires by the bartender for flair bartending?
5. Give the method of building a Hi ball.

2.8 Reference

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UNIT 3

WINES

Structure

3.1 Objective

The learner will be able to define win, understand the difference between wine and other beverages. Leaner will also be able to identify various processes and types of wines besides understanding the grape varieties, impact of grapes on the wine.

3.2 Introduction & History of Wines

Wine is an alcoholic beverage made from fermented grapes or other fruits. The natural chemical balance of grapes lets them ferment without the addition of sugars, acids, enzymes, water, or other nutrients. Yeast consumes the sugars in the grapes and converts them into alcohol and carbon dioxide. Different varieties of grapes and strains of yeasts produce different styles of wine. The well-known variations result from the very complex interactions between the biochemical development of the fruit, reactions involved in fermentation, terroir and subsequent appellation, along with human intervention in the overall process.

The alcohol in wine is a psychoactive drug, as is true for all alcoholic beverages, commonly used for its intoxicating effects today and throughout history. The psychoactive effects of wine are evident at the normal serving size.

Wines made from produce besides grapes are usually named after the product from which they are produced (for example, rice wine, pomegranate wine, apple wine and elderberry wine) and are generically called fruit wine. The term "wine" can also refer to starch-fermented or fortified beverages having higher alcohol content, such as barley wine, huangjiu, and rice wines such as mijiu and sake.

Wine has a rich history dating back thousands of years, with the earliest traces so far discovered having occurred c. 6000 BC inGeorgia. It had reached the Balkans by c. 4500 BC and was consumed and celebrated in ancient Greece and Rome.

Since its earliest appearance in written records, wine has also played an important role in religion. Red wine was closely associated with blood by the ancient Egyptians, who, according to Plutarch, avoided its free consumption as late as the 7th-century BC Saite dynasty, "thinking it to be the blood of those who had once battled against the gods". The Greek cult andmysteries of Dionysus, carried on by the Romans in their Bacchanalia, were the origins of western theater. Judaismincorporates it in the Kiddush and Christianity in its Eucharist, while alcohol consumption is forbidden in Islam.

History

Wines from other fruits, such as apples and berries, are usually named after the fruit from which they are produced combined with the word "wine" (for example, apple wine and elderberry wine) and are generically called fruit wine or country wine (not to be confused with the French term *vin de pays*). Besides the grape varieties traditionally used for winemaking, most fruits naturally lack either a high amount of fermentable sugars, relatively low acidity, yeast nutrients needed to promote or maintain fermentation or a combination of these three characteristics. This is probably one of the main reasons why wine derived from grapes has historically been more prevalent by far than other types and why specific types of fruit wine have generally been confined to regions in which the fruits were native or introduced for other reasons.

Other wines, such as barley wine and rice wine (e.g. sake), are made from starch-based materials and resemble beer more than wine, while ginger wine is fortified with brandy. In these latter cases, the term "wine" refers to the similarity in alcohol content rather than to the production process. The commercial use of the English word "wine" (and its equivalent in other languages) is protected by law in many jurisdictions.

Archaeological evidence has established the earliest-known production of wine from fermenting grapes during the late Neolithic or early Chalcolithic in the Caucasus and the northern edge of the Middle East. An extensive gene-mapping project in 2006 analyzed the heritage of more than 110 modern grape cultivars, narrowing their origin to a region of Georgia. This matches the

earliest discovered sites containing shards of wine-stained pottery, dated to c.6000 BC in Georgia, and c. 5000 BC in Iran. The jars at the northwesternIranian site already showed treatment with preservative turpentine pine resin, the flavoring of modern retsina. By c.4500 BC, wine production had spread to Grecian Macedonia, the site of the first recovered crushed grapes, and an entire winery was discovered in 2011 inside the Areni-1 cave in Armenia, dated to c4100 BC.

A 2003 report by archaeologists indicates a possibility that grapes were mixed with rice to produce mixed fermented beverages in China in the early years of the seventh millennium BC. Pottery jars from the Neolithic site of Jiahu, Henan, contained traces of tartaric acid and other organic compounds commonly found in wine. However, other fruits indigenous to the region, such as hawthorn, cannot be ruled out. If these beverages, which seem to be the precursors of rice wine, included grapes rather than other fruits, they would have been any of the several dozen indigenous wild species in China, rather than *Vitis vinifera*, which was introduced there some 6,000 years later.

The spread of wine culture westwards was most probably due to the Phoenicians who spread outward from a base of city-states along the Lebanese and Israeli coast. The wines of Byblos were exported to Egypt during the Old Kingdom and then throughout the Mediterranean. Evidence includes two Phoenician shipwrecks from 750 BC discovered by Robert Ballard, whose cargo of wine was still intact. As the first great traders in wine (*cherem*), the Phoenicians seem to have protected it from oxidation with a layer of olive oil, followed by a seal of pinewood and resin, again similar to retsina.

The first known mention of grape-based wines in India is from the late 4th-century BC writings of Chanakya, the chief minister of EmperorChandragupta Maurya. In his writings, Chanakya condemns the use of alcohol while chronicling the emperor and his court's frequent indulgence of a style of wine known as *madhu*.

The ancient Romans planted vineyards near garrison towns so wine could be produced locally rather than shipped over long distances. Some of these areas are now world renowned for wine production. The Romans discovered that burning sulfur candles inside empty wine vessels keeps them fresh and free from a vinegar smell. In medieval Europe, the Roman Catholic Church supported wine because the clergy required it for the Mass. Monks in France made wine for years, aging it in caves. An old English recipe that survived in various forms until the 19th century calls for refining white wine from bastard—bad or tainted *bastardo* wine.

3.3 Grape varieties

Wine is usually made from one or more varieties of the European species *Vitis vinifera*, such as Pinot noir, Chardonnay, Cabernet Sauvignon, Gamay and Merlot. When one of these varieties is used as the predominant grape (usually defined by law as minimums of 75% to 85%), the result is a "varietal" as opposed to a "blended" wine. Blended wines are not considered inferior to

varietal wines, rather they are a different style of winemaking; some of the world's most highly regarded wines, from regions like Bordeaux and the Rhone Valley, are blended from different grape varieties.

Wine can also be made from other species of grape or from hybrids, created by the genetic crossing of two species. *V. labrusca* (of which the Concord grape is a cultivar), *V. aestivalis*, *V. ruprestris*, *V. rotundifolia* and *V. riparia* are native North American grapes usually grown to eat fresh or for grape juice, jam, or jelly, and only occasionally made into wine.

Hybridization is different from grafting. Most of the world's vineyards are planted with European *V. vinifera* vines that have been grafted onto North American species' rootstock, a common practice due to their resistance to phylloxera, a root louse that eventually kills the vine. In the late 19th century, most of Europe's vineyards (excluding some of the driest in the south) were devastated by the infestation, leading to widespread vine deaths and eventual replanting. Grafting is done in every wine-producing region in the world except in Argentina, the Canary Islands and Chile—the only places not yet exposed to the insect.

In the context of wine production, *terroir* is a concept that encompasses the varieties of grapes used, elevation and shape of the vineyard, type and chemistry of soil, climate and seasonal conditions, and the local yeast cultures. The range of possible combinations of these factors can result in great differences among wines, influencing the fermentation, finishing, and aging processes as well. Many wineries use growing and production methods that preserve or accentuate the aroma and taste influences of their unique *terroir*. However, flavor differences are less desirable for producers of mass-market table wine or other cheaper wines, where consistency takes precedence. Such producers try to minimize differences in sources of grapes through production techniques such as micro-oxygenation, tannin filtration, cross-flow filtration, thin-film evaporation, and spinning cones.

3.4 Classification of Wines

"Wine"

Within the European Union, the term "wine" in English and in translation is reserved exclusively for the fermented juice of grapes.

Within the United States, wine may include the fermented juice of any fruit or agricultural product, provided that it is between 7% and 24% alcohol by volume and intended for non-industrial use. With the exceptions of cider, perry, and sake, such non-grape wines are to label themselves by the word "wine" qualified by a truthful description of the originating product: "honey wine", "dandelion wine", (blended) "fruit wine", etc.

Other jurisdictions have similar rules dictating the range of products qualifying as "wine".

Types of Wine

Wines can be classified primarily by the grape variety used to make the wine and the region where the grapes are grown. Wines classified on the basis of grape variety are called varietals and those classified on the basis of region are named by the region itself.

There are different types of wines and wine styles. Basically wines can be classified into two general categories. They are white wines which are colorless and red wines which have the color intensity based on the soaking time. This is the information that most of us know.

But wines can be classified by their taste also. The sweetness of the wine helps us to judge the wine by its taste. Classification of the wine according to the taste is as follows:

- Dry wines
- Medium Wines
- Sweet wines

3.4.1 Classification based on color

Apart from the classification of wine by taste the general types of wines are as follows.

Red wines

Red wines are color wines. Red wines are made from the red grape varieties. These wines get their color by allowing the skin of the grapes to get contact with the grape juice during the wine making process. Red wines are available in different varieties and taste. The most popular red wines are:

- Cabernet Sauvignon
- Merlot
- Pinot Noir
- Zinfandel

White wines

White wines are generally colorless and they are made from the white grape varieties. Some of the white wines can be made from the red grapes. In such a case the skin of the grapes is not allowed to have any contact with the grape juice. The white wines generally range from dry to sweet wines. The most popular white wines are:

- Chardonnay
- Riesling
- Sauvignon Blanc
- Gewurztraminer

Rose wines

Rose wines are also called as Blush wines. Rose wines are not true not truly red, instead they have enough of reddish tinge to make them differentiate from the white wines. Rose wines are prepared from the red grape varieties. The most popular rose wine variety is:

- Zinfandel

3.4.2 Regional wine classifications

Many **regional wine classifications** exist as part of tradition or appellation law. The most common of these is based on vineyard sites and include the Bordeaux Wine Official Classification of 1855, though some regions classify their wines based on the style like the German wine classification system. Vineyard classification has a long history dating from some early examples in Jurançon in the 14th century, in 1644 when the council of Würzburg ranked the city's vineyards by quality,and the early five-level designation of vineyards based on quality in Tokaj-Hegyalja in 1700.

Other well known classifications include:

- Classification of Saint-Émilion wine of Bordeaux
- Classification of Graves wine of Bordeaux
- Cru Bourgeois of Bordeaux (Médoc)
- Classified estates of Provence

The follow regions are classified by vineyards, not estate.

- Grand cru of Burgundy and Alsace

3.4.3 French Wine Classification

1. Appellation d'Origine Controlee (AOC)
28% of total production. 30% exported, 70% consumed within France. France was the first country to set up a system for controlling the origin and quality of its wines. The best French wines are almost all AOC. The label indicates where the wine comes from, and the appellation law regulates the grape varieties used, viticulture methods, harvest and yield restrictions, minimum alcoholic content, wine making techniques and the quality of the product - approved by an official tasting panel

2. Vin Delimite de Qualite Superieure (VDQS)
1.3% of total production, 10% exported, 80% consumed within France. VDQS wines are subject to controls similar to those with AOC status, but the yields may be higher. Many VDQS wines have been promoted to AOC status and this has reduced the average annual production in recent years.

3. Vin de Pays (VDP)
13% of total production, 10% exported , 90% consumed in France
Can be described as French country wines. Although they must have a specified origin on the label, a wide range of grape varieties can be used and high yields are allowed - with the result that the quality of the wine varies greatly.

4. Vin de table

12% exported, 88% consumed within France. Also known as Vins Ordinaire or Vin de Consommation courante, these are inexpensive wines for everyday drinking and are not intended for keeping. The label must not specify the wine's origin and both strength and quality may vary.

3.4.4 By vinification methods and style

Wines may be classified by vinification methods. These include classifications such as red or white wine, sparkling, semi-sparkling or still, fortified and dessert wines. The color of wine is not determined by the juice of the grape, which is almost always clear, but rather by the presence or absence of the grape skin during fermentation. Grapes with colored juice, for example alicante bouchet, are known as teinturier. Red wine is made from red (or black) grapes, but its red color is bestowed by a process called maceration, whereby the skin is left in contact with the juice during fermentation. White wine can be made from any colour of grape as the skin is separated from the juice during fermentation. A white wine made from a very dark grape may appear pink or 'blush'. A form of Rosé is called *Blanc de Noirs* where the juice of red grapes are allowed contact with the skins for a very short time (usually only a couple of hours).

Sparkling and still wines	Sparkling wines such as champagne, contain carbon dioxide which is produced naturally from fermentation or force-injected later. To have this effect, the wine is fermented twice, once in an open container to allow the carbon dioxide to escape into the air, and a second time in a sealed container, where the gas is caught and remains in the wine.Sparkling wines that gain their carbonation from the traditional method of bottle fermentation are labelled "Bottle Fermented", *"Méthode Traditionelle"*, or *"Méthode Champenoise"*. The latter designation was outlawed for all wines other than Champagne (which for obvious reasons does not bother to utilize it) in Europe in 1994.
	Other international denominations of sparkling wine include Sekt or Schaumwein (Germany), Cava (Spain) , Spumante (Italy) and Espumante (Portugal). Semi-sparkling wines are sparkling wines that contain less than 2.5 atmospheres of carbon dioxide at sea level and 20 °C. Some countries such as the UK impose a higher tax on fully sparkling wines. Examples of semi-sparkling synonym terms are *Frizzante* in Italy, *Vino de Aguja* in Spain and *Petillant* in France. In most countries except the United States, champagne is legally defined as sparkling wine originating from a region (Champagne, Towns "Reims, Épernay") in France. Still wines are wines that have not gone through the sparkling wine

	methods and have no effervescence.
Dessert and fortified wine	Dessert wines range from slightly sweet (with less than 50 g/L of sugar) to incredibly sweet wines (with over 400 g/L of sugar). Late harvest wines such as Spätlese are made from grapes harvested well after they have reached maximum ripeness. Dried grape wines, such as Recioto and Vin Santo from Italy, are made from grapes that have been partially raisined after harvesting. **Botrytized wines** are made from grapes infected by the mold Botrytis cinerea or noble rot. These include Sauternes from Bordeaux, numerous wines from Loire such as Bonnezeaux and Quarts de Chaume, Tokaji Aszú from Hungary, and Beerenauslese. Ice Wine is made from grapes that are harvested while they are frozen. Fortified wines are often sweeter, and generally more alcoholic wines that have had their fermentation process stopped by the addition of a spirit, such as brandy, or have had additional spirit added after fermentation. Examples include Port, Madeira and Sherry.
Table wines	Table wines may have an alcohol content that is no higher than 14% in the U.S.. In Europe, light wine must be within 8.5% and 14% alcohol by volume. Thus, unless a wine has more than 14% alcohol, or it has bubbles, it is a table wine or a light wine. Table wines are usually classified as "white," "red," or "rosé," depending on their colour. In Europe 'vins de table' (in French), 'vino da tavola' (in Italian), 'Tafelwein' (in German) or 'vino de mesa' (in Spanish), which translate to 'table wine' in English, are cheaper wines that often on the label do not include the information on the grape variety used or the region of origin.
Cooking wine or Cooking	**Cooking wine** or **Cooking sherry** usually refers to inexpensive grape wine (or rice wine in Chinese and other East Asian cuisine). It is intended for use as an ingredient in food rather than as a beverage. Cooking wine typically available in North America is treated with salt as a preservative and food colouring. In other countries sherry wine is used for cooking. There is a school of thought that advises against cooking with any wine one would find unacceptable to drink. When a usual wine bottle is opened and the wine is exposed to oxygen, a fermentative process will transform the alcohol into acetic acid resulting in wine vinegar. This does not

	happen in fortified wines, as the alcohol content is too high. The salt in cooking wine inhibits the growth of the microorganisms that produce acetic acid. This will preserve a bottle of cooking wine, which may be opened and used occasionally over a long period of time.
By vintage or varietal	A vintage wine is one made from grapes that were all, or primarily, grown in a single specified year, and are accordingly dated as such. Consequently, it is not uncommon for wine enthusiasts and traders to save bottles of an especially good vintage wine for future consumption. However, there is some disagreement and research about the significance of vintage year to wine quality. Most countries allow a vintage wine to include a portion of wine that is not from the labeled vintage. A varietal wine is wine made from a dominant grape such as a Chardonnay or a Cabernet Sauvignon. The wine may not be entirely of that one grape and varietal labeling laws differ. In the United States a wine needs to be composed of at least 75% of a particular grape to be labeled as a varietal wine. In the European Union, a minimum of 85% is required if the name of a single varietal is displayed, and if two or more varietals are mentioned, these varietals combined must make up 100% and they must be listed in descending order. E.g., a mixture of 70% Chardonnay and 30% Viognier must be called Chardonnay-Viognier rather than Viognier-Chardonnay.
European classifications	France has various appellation systems based on the concept of *terroir*, with classifications ranging from *Vin de Table* ("table wine") at the bottom, through *Vin de Pays* and *Appellation d'Origine Vin Délimité de Qualité Supérieure* (AOVDQS), up to *Appellation d'Origine Contrôlée* (AOC) or similar, depending on the region. Portugal has developed a system resembling that of France and, in fact, pioneered this concept in 1756 with a royal charter creating the Demarcated Douro Region and regulating the production and trade of wine. Germany created a similar scheme in 2002, although it has not yet achieved the authority of the other countries' classification systems. Spain, Greece and Italy have classifications based on a dual system of region of origin and product quality.

3.5 The Grape

Grape is the berry or fruit of the vine, whose juice is the essential ingredient in wine. The solids, including the stems, skin, seeds and pulp left after the juicing process are called grape *pomace.*

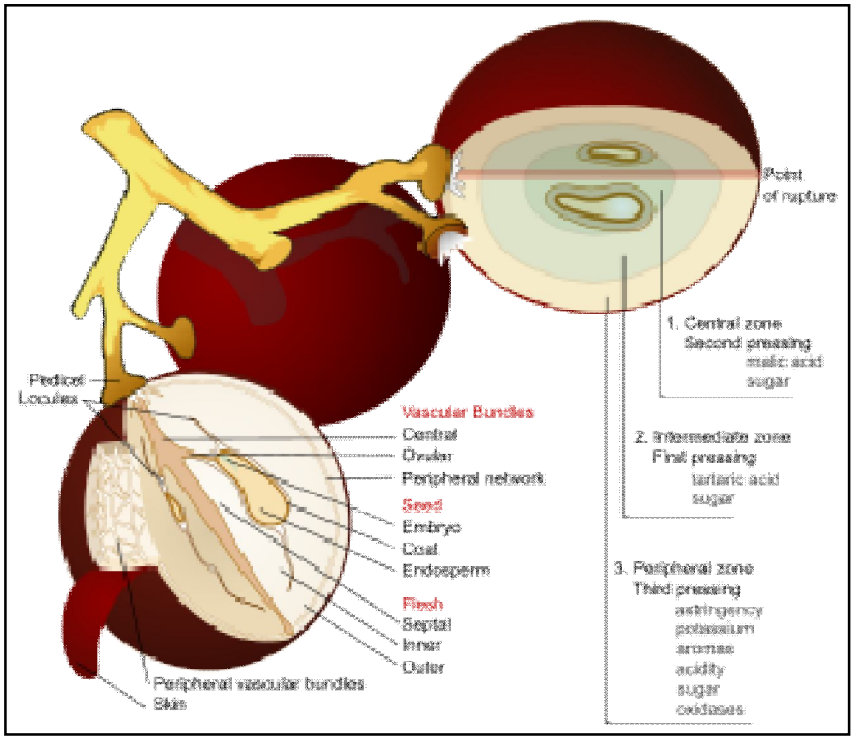
Shape : Flattened, spherical and oval, elongated and finger-like.

Color : Varies from green to yellow, pink, crimson, dark blue, black.

Weight : Table grapes - 15 grams / 0.5 oz. each (Maximum).

Wine grapes - 1 – 2 grams each (Average).

Care should be taken not to crush pips and stalks because these contain tannins and bitter oils which impart bad flavor.



GRAPE VARIETIES

Vines make up a large , diverse plant family. All the classic wines – making grapes comes from the species ***' Vitis Vinifera',*** which yields the largest and the sweetest fruits. Thousands of varieties of Vitis Vinifera exist. The grape variety determines the character of any given wine, although growing conditions and the wine-making process will affect the final result.

Black Grape Varieties

Cabernet Sauvignon	The world's most renowned grape variety for the production of fine red wine. Based in Bordeaux, it is almost invariably blended with other grapes, especially Merlot, and other traditional native varieties often used to produce Varietal wines. High in tannins, they age well but need time to mature. Rich

	in color, aroma and depth, they have a flavor of black-currants. Wines : Bordeaux Superieur, Chateau Haut-Brion.
Cabernet Franc	French black grape variety, much blended with and overshadowed by Cabernet Sauvignon. As a wine, rather lighter in color and tannins, and matures earlier. Gives light to medium body with a herbaceous aroma. Wines : Chateau Canon, Chateau Latour.
Gamay	French red grape variety solely responsible for the uncomplicated light fruity reds of Beaujolais. They are best when young and fresh. Often blended with Pinot Noir.The fruit, naturally low in potential alcohol, its charm lies in its refreshing lightness.The wine has a distinct aroma, and a raspberry flavor. Wines : Moulin-a-vent, Fleurie, Morgon.
Grenache	The world's second most widely planted grape. The wine, generally blended, is paler than most reds, sweeter and oxidizes early. Makes warm, fruity wines with a high alcoholic content and aromas of freshly grown black pepper. Wines : Tavel, Chateauneuf-du-Pape.
Merlot	The black grape variety associated with the wines of St.Emillion and Pomerol in Bordeaux.Unblended Merlots are usually soft and easy-drinking wines with flavors of plums and fruit-cake. Wines : Chateau Petrus, Chateau Lafleur.
Pinot Noir	Burgundy's red grape variety which makes the most sumptuous reds in the world.It is both difficult and expensive to produce. Rarely blended, Pinot Noir grapes make fairly pale-coloured, light-to-medium bodied reds, with a strawberry or raspberry aroma. Wines : Chambertin, Romanee-Conti.

White Grape Varieties

Chardonnay	Immensely popular, it is the variety behind the classic white Burgundy and one of the three varieties used to make champagnes. Produces dry and light (crisp apple-like flavor) to medium and full-bodied wines. Aging in oak gives the wine a depth of flavor. Wines : Chablis, Pouilly-Fuisse.
Chenin Blanc	Most versatile variety, its high acidity characterizes these grapes. White wines from very dry to sweet and sparkling are produced. Loire is one of the main regions. Dry wines are fresh and fruity, sweet wines are well-balanced and honeyed. Aging improves the quality of the wine. Wines : Chenin Blanc.
Gewurztraminer	A pink-skinned grape responsible for particularly pungent, full-bodied white wines.Deep color, opulent aroma and full body. It is easy to tire of its weight and its exotic flavor of lychees and heavily-scented roses. Has low acidity, high alcohol content, often over 13 %, and will go with spicy food. Wines : Gewurztraminer, Traminer.

Riesling	Produces long-lived wines and transmits the style of the vineyard. Has a powerful, rapier-like aroma described as flowery, steely, honeyed and a blend of mineral elements. Wines are light in body and low in alcohol. Strongly flavored and very long-lived. High acidity always balances richness. Produced in the dry Alsace region. Wines : Riesling.

3.6 Wine Making Process

After the harvest, the grapes are taken into a winery and prepared for primary ferment. At this stage red wine making diverges from white wine making. Red wine is made from the must (pulp) of red or black grapes and fermentation occurs together with the grape skins, which give the wine its color. White wine is made by fermenting juice which is made by pressing crushed grapes to extract a juice; the skins are removed and play no further role. Occasionally white wine is made from red grapes; this is done by extracting their juice with minimal contact with the grapes' skins. Rosé wines are either made from red grapes where the juice is allowed to stay in contact with the dark skins long enough to pick up a pinkish color (maceration or saignée) or by blending red wine with white wine. White and rosé wines extract little of the tannins contained in the skins.

To start primary fermentation yeast may be added to the must for red wine or may occur naturally as ambient yeast on the grapes or in the air. Yeast may be added to the juice for white wine. During this fermentation, which often takes between one and two weeks, the yeast converts most of the sugars in the grape juice into ethanol (alcohol) and carbon dioxide. The carbon dioxide is lost to the atmosphere.

After the primary fermentation of red grapes the free run wine is pumped off into tanks and the skins are pressed to extract the remaining juice and wine. The press wine is blended with the free run wine at the winemaker's discretion. The wine is kept warm and the remaining sugars are converted into alcohol and carbon dioxide.

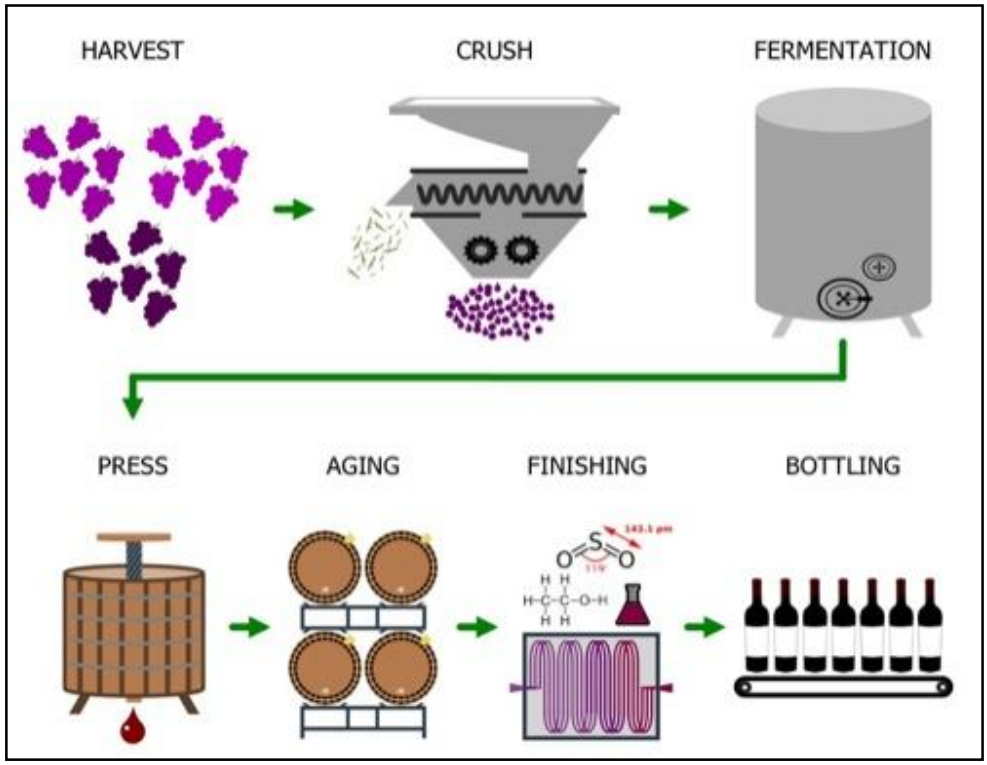
The next process in the making of red wine is malo-lactic conversion. This is a bacterial process which converts "crisp, green apple" malic acid to "soft, creamy" lactic acid softening the taste of the wine. Red wine is sometimes transferred to oak barrels to mature for a period of weeks or months; this practice imparts oak aromas and some tannin to the wine. The wine must be settled or clarified and adjustments made prior to bottling.

The time from harvest to drinking can vary from a few months for Beaujolais nouveau wines to over twenty years for wine of good structure with high levels of acid, tannin or sugar. However, only about 10% of all red and 5% of white wine will taste better after five years than it will after just one year. Depending on the quality of grape and the target wine style, some of these steps may be combined or omitted to achieve the particular goals of the winemaker. Many wines of comparable quality are produced using similar but distinctly different approaches to their

production; quality is dictated by the attributes of the starting material and not necessarily the steps taken during vinification.

Variations on the above procedure exist. With sparkling wines such as Champagne, an additional, "secondary" fermentation takes place inside the bottle, dissolving trapped carbon dioxide in the wine and creating the characteristic bubbles. Sweet wines or off-dry wines are made by arresting fermentation before all sugar has been converted into ethanol and allowing some residual sugar to remain. This can be done by chilling the wine and adding sulphur and other allowable additives to inhibit yeast activity or sterile filtering the wine to remove all yeast and bacteria. In the case of sweet wines, initial sugar concentrations are increased by harvesting late (late harvest wine), freezing the grapes to concentrate the sugar (ice wine), allowing or encouraging botrytis cinerea fungus to dehydrate the grapes or allowing the grapes to raisin either on the vine or on racks or straw mats. Often in these high sugar wines, the fermentation stops naturally as the high concentration of sugar and rising concentration of ethanol retard the yeast activity. Similarly in fortified wines, such as port wine, high proof neutral grape spirit (brandy) is added to arrest the ferment and adjust the alcohol content when the desired sugar level has been reached. In other cases the winemaker may choose to hold back some of the sweet grape juice and add it to the wine after the fermentation is done, a technique known in Germany as süssreserve.

The process produces wastewater, pomace, and lees that require collection, treatment, and disposal or beneficial use.



3.7 Reading the Wine Label

Regardless of where a wine comes from, there will be certain standard information on every label. Each item may be in a different place from label to label, but it will definitely appear somewhere on the label. Other information is optional, not mandatory, but it appears frequently enough to merit inclusion in the following list of what you will generally find on a wine label:

1. Name of the wine - Mandatory
2. The name of the producer - Mandatory
3. The name and location of the person or company legally responsible for making the wine, in some cases this name can be the same as #2) - Mandatory
4. The volume of the bottle's contents (this can appear either on the label itself or molded into the glass bottle, usually near its base) - Mandatory.
5. The alcohol content of the wine (this is usually expressed as a percentage of the wine's volume) - Mandatory.
6. The name of the shipper and importer responsible for bringing the wine to the country (eg. India), occasionally the shipper and importer are two different companies - Mandatory.
7. The country of origin (always in English) - Mandatory
8. The kind of wine (always in English) - Optional
9. The quality of the wine - Optional
10. The year the wine was made, also known as the vintage - Optional.

FRENCH WINE LABELS

Wine labels give certain mandatory information, such as name of the bottler, who is legally responsible for the wine. Other details include :

- Color of the wine
- Style of the wine
- Grape variety
- Vintage
- Alcoholic strength

3.8 Pronunciations: Some Tips

French

1. "CH" is pronounced as "SH". E.g. Chablis, Château.
2. "LL" is pronounced as a "Y". E.g. Paulliac, Cadillac.
3. "J" is pronounced as "AS" in Asian. E.g. Jour, Joie.
4. "GN" is pronounced as a compressed "NY" as in onion. E.g. Sauvignon, Champagne, Bourgogne.

5. “IN” is pronounced as “AN” as in fan. E.g. Taittinger, Bollinger, Vintage (In English, it may be alternatively pronounced as rhyming with age.)
6. “OI” is pronounced as “OA” as in Goa. E.g. Terroir, Pinot Noir.
7. As a general rule, last letters are silent. E.g. Blanc, Bordeaux. (Popular Exceptions: Moët & Hennessy, Krug, Languedoc, and Petrus.)

Italian

1. “CH” is pronounced as “K”. E.g. Chianti.
2. “CI” is pronounced as “CHI”. E.g. Montepulciano, Montalcino, Ciao.
3. “CE” is pronounced as “CHE”. E.g. Cenci.
4. “GE” is pronounced as “JE” as in general. E.g. Gelato.
5. “GI” is pronounced as “JI” as in gist. E.g. Giovanni.
6. As a general rule, all that is written is pronounced.

Spanish

1. The “~” accent lends the sound of a compressed “NY”. E.g. Los Niños.
2. When two vowels appear together, they are pronounced together. E.g. Reina.
3. “GUE” is pronounced as “GE” as in get. E.g. Miguel.
4. “GUI” is pronounced as “GI” as in give. E.g. Guia
5. That apart, what’s written is pronounced.

3.9 Summary

Wine is an alcoholic beverage made from fermented grapes or other fruits. The natural chemical balance of grapes lets them ferment without the addition of sugars, acids, enzymes, water, or other nutrients. Yeast consumes the sugars in the grapes and converts them into alcohol and carbon dioxide. Different varieties of grapes and strains of yeasts produce different styles of wine. The well-known variations result from the very complex interactions between the biochemical development of the fruit, reactions involved in fermentation, terroir and subsequent appellation, along with human intervention in the overall process.

Wine is classified based on colour, origin, Local laws and similarly based on alcoholic strength. The quality of wine is dependent on the quality of grapes and variety.

3.10 Review Questions

Q1 Define Wine? Explain various consideration for a beverage to be termed as “Wine”.

Q 2 Draw and explain the structure of grapes.

Q 3. How do you classify wines based on the colour and alcoholic strength?

Q 4. Write a short note on the process of wine making.

Q 5 Write a short note on Wine Label.

3.11 Suggested Reading

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UNIT 4.

Old World Wines

Structure

4.0 Objectives

The learner will be able to define win, understand the difference between old world wine and other beverages. Leaner will also be able to identify various processes and types of old world wines besides understanding the grape varieties, impact of grapes on the wine.

4.1 Introduction

Old World wine refers primarily to wine made in Europe but can also include other regions of the Mediterranean basin with long histories of winemaking such as North Africa and the Near East. The phrase is often used in contrast to "New World wine" which refers primarily to wines from New World wine regions such as the United States, Australia, South America and South Africa. The term "Old World wine" does not refer to a homogeneous style with "Old World wine regions" like Austria, France, Germany, Italy, Portugal, Romania and Spain each making vastly different styles of wine even within their own borders. Rather, the term is used to describe general differences in viticulture and winemaking philosophies between the Old World regions where tradition and the role of *terroir* lead versus the New World where science and the role of the winemaker are more often emphasized. In recent times, the globalization of wine and advent of flying wine makers have lessened the distinction between the two terms with winemakers in one region being able to produce wines that can display the traits of the other region—i.e. an "Old World style" wine being produced in a New World wine region like California or Chile and vice versa.

4.2 Facts file,

Archaeological evidence has established the earliest-known production of wine from fermenting grapes during the late Neolithic or early Chalcolithic in the Caucasus and the northern edge of the Middle East. An extensive gene-mapping project in 2006 analyzed the heritage of more than 110 modern grape cultivars, narrowing their origin to a region of Georgia. This matches the earliest discovered sites containing shards of wine-stained pottery, dated to c. 6000 BC in Georgia, and c. 5000 BC in Iran. The jars at the northwestern Iranian site already showed treatment with preservative turpentine pine resin, the flavoring of modern retsina. By c. 4500 BC, wine production had spread to Grecian Macedonia, the site of the first recovered crushed grapes, and an entire winery was discovered in 2011 inside the Areni-1 cave in Armenia, dated to c. 4100 BC. A 2003 report by archaeologists indicates a possibility that grapes were mixed withrice to produce mixed fermented beverages in China in the early years of the seventh millennium BC. Pottery jars from the Neolithic site of Jiahu, Henan, contained traces of tartaric acid and other organic compounds commonly found in wine. However, other fruits indigenous to the region, such as hawthorn, cannot be ruled out. If these beverages, which seem to be the precursors of rice wine, included grapes rather than other fruits, they would have been any of the several dozen indigenous wild species in China, rather than *Vitis vinifera*, which was introduced there some 6,000 years later.

The spread of wine culture westwards was most probably due to the Phoenicianswho spread outward from a base of city-states along the Lebanese and Israeli coast. The wines of Byblos were exported to Egypt during the Old Kingdom and then throughout the Mediterranean. Evidence includes two Phoenician shipwrecks from 750 BC discovered by Robert Ballard, whose cargo of wine was still intact. As the first great traders in wine (*cherem*), the Phoenicians seem to have protected it from oxidation with a layer of olive oil, followed by a seal of pinewood and resin, again similar to retsina. The two most guiding influences of Old World style winemaking are that of tradition and *terroir*. The former refers to the long history of a wine region, while the latter refers to geography and the unique characteristics of a place. The centuries-old histories of many Old World wine regions have given the regions time to develop and adapt techniques that presumably best suit a particular vine growing area. These can include which grape varieties to plant,trellising methods, maximum permitted yields, as well as winemaking techniques. Over time, these traditional practices became enshrined in local regulations such as the French *Appellation d'origine contrôlée* (AOC), Italian*Denominazione di origine controllata* (DOC), Spanish *Denominación de Origen*(DO) and Portuguese *Denominação de Origem Controlada* (DOC) laws.

Terroir is often used to describe the aspects of a wine region such as soil, climate and topography that are often out of the winemaker's control. They are the unique attributes that, theoretically, make a Sangiovese based wine from Chianti taste different from a Sangiovese based wine made anywhere else in the world even if exactly the same winemaking techniques

are used. While wine in the New World are often labeled based on the varietal (such as Chardonnay or Tempranillo), wines in the Old World are generally labeled based on the region or place that they come from (such as Montrachet or Ribera del Duero). This is because Old World winemakers believe that the unique *terroir*-driven characteristics of where a wine comes from plays a more distinct role in shaping the resulting wine than the grape variety itself

Literary references to wine are abundant in Homer (8th century BC, but possibly relating earlier compositions), Alkman (7th century BC), and others. In ancient Egypt, six of 36 wine amphoras were found in the tomb of King Tutankhamun bearing the name "Kha'y", a royal chief vintner. Five of these amphoras were designated as originating from the king's personal estate, with the sixth from the estate of the royal house of Aten.[39] Traces of wine have also been found in central AsianXinjiang in modern-day China, dating from the second and first millennia BC.

The first known mention of grape-based wines in India is from the late 4th-century BC writings of Chanakya, the chief minister of Emperor Chandragupta Maurya. In his writings, Chanakya condemns the use of alcohol while chronicling the emperor and his court's frequent indulgence of a style of wine known as *madhu*.

The ancient Romans planted vineyards near garrison towns so wine could be produced locally rather than shipped over long distances. Some of these areas are now world renowned for wine production. The Romans discovered that burning sulfur candles inside empty wine vessels keeps them fresh and free from a vinegar smell. In medieval Europe, the Roman Catholic Church supported wine because the clergy required it for the Mass. Monks in France made wine for years, aging it in caves. An old English recipe that survived in various forms until the 19th century calls for refining white wine from bastard—bad or tainted *bastardo* wine.

4.3 Principal wine regions,

Ancient religions

The use of wine in ancient Near Eastern and Ancient Egyptian religious ceremonies was common. Libations often included wine, and the religious mysteries of Dionysus used wine as a sacramental entheogen to induce a mind-altering state.

Judaism

Wine is an integral part of Jewish laws and traditions. The *Kiddush* is a blessing recited over wine or grape juice to sanctify the Shabbat. On Pesach (Passover) during the Seder, it is a Rabbinic obligation of adults to drink four cups of wine. In the Tabernacle and in the Temple in Jerusalem, the libation of wine was part of the sacrificial service. Note that this does not mean that wine is a symbol of blood, a common misconception that contributes to the Christian myth of the blood libel. "It has been one of history's cruel ironies that the blood libel—accusations against Jews using the blood of murdered gentile children for the making of wine and matzot—became the false pretext for numerouspogroms. And due to the danger, those who live in a place

where blood libels occur are halachically exempted from using red wine, lest it be seized as "evidence" against them."

Christianity

In Christianity, wine is used in a sacred rite called the Eucharist, which originates in the Gospel account of the Last Supper (Gospel of Luke 22:19) describing Jesussharing bread and wine with his disciples and commanding them to "do this in remembrance of me." Beliefs about the nature of the Eucharist vary among denominations (see Eucharistic theologies contrasted).

While some Christians consider the use of wine from the grape as essential for the validity of the sacrament, many Protestants also allow (or require) pasteurized grape juice as a substitute. Wine was used in Eucharistic rites by all Protestant groups until an alternative arose in the late 19th century. Methodist dentist and prohibitionist Thomas Bramwell Welch applied new pasteurization techniques to stop the natural fermentation process of grape juice. Some Christians who were part of the growing temperance movement pressed for a switch from wine to grape juice, and the substitution spread quickly over much of the United States, as well as to other countries to a lesser degree. There remains an ongoing debate between some American Protestant denominations as to whether wine can and should be used for the Eucharist or allowed as an ordinary beverage, with Catholics and some mainline Protestants allowing wine drinking in moderation, and some conservative Protestant groups opposing consumption of alcohol altogether.

Islam

Alcoholic beverages, including wine, are forbidden under most interpretations of Islamic law. Iran had previously had a thriving wine industry that disappeared after the Islamic Revolution in 1979. In Greater Persia, *mey* (Persian wine) was a central theme of poetry for more than a thousand years, long before the advent of Islam. Some Alevi sects use wine in their religious services.

Certain exceptions to the ban on alcohol apply. Alcohol derived from a source other than the grape (or its byproducts) and the date is allowed in "very small quantities" (loosely defined as a quantity that does not cause intoxication) under the Sunni Hanafi *madhab*, for specific purposes (such as medicines), where the goal is not intoxication. However, modern Hanafi scholars regard alcohol consumption as totally forbidden

4.4 Wine Laws, Grape Varieties,

Regulations govern the classification and sale of wine in many regions of the world. European wines tend to be classified by region (e.g. Bordeaux, Rioja and Chianti), while non-European wines are most often classified by grape (e.g. Pinot noir and Merlot). Market recognition of particular regions has recently been leading to their increased prominence on non-European wine labels. Examples of recognized non-European locales include Napa Valley, Santa Clara Valley and Sonoma Valley in California; Willamette Valley in Oregon; Columbia

Valley in Washington; Barossa Valley in South Australia and Hunter Valley in New South Wales; Luján de Cuyo in Argentina; Central Valley in Chile; Vale dos Vinhedos in Brazil; Hawke's Bay and Marlborough in New Zealand; and Okanagan Valley and Niagara Peninsula in Canada.

Some blended wine names are marketing terms whose use is governed by trademark law rather than by specific wine laws. For example, Meritage (sounds like "heritage") is generally a Bordeaux-style blend of Cabernet Sauvignon and Merlot, but may also include Caberne Franc, Petit Verdot, and Malbec. Commercial use of the term Meritage is allowed only via licensing agreements with the Meritage Association.

4.5 Production And Brand Names Of France , Germany ,Italy , Spain, Portugal

French wine is produced all throughout France, in quantities between 50 and 60 million hectolitres per year, or 7–8 billion bottles. France is one of the largest wine producers in the world. French wine traces its history to the 6th century BC, with many of France's regions dating their wine-making history to Roman times. The wines produced range from expensive high-end wines sold internationally to more modest wines usually only seen within France.

Two concepts central to higher end French wines are the notion of "terroir", which links the style of the wines to the specific locations where the grapes are grown and the wine is made, and the Appellation d'Origine Contrôlée (AOC) system. Appellation rules closely define which grape varieties and winemaking practices are approved for classification in each of France's several hundred geographically defined appellations, which can cover entire regions, individual villages or even specific vineyards.

France is the source of many grape varieties (Cabernet Sauvignon, Chardonnay, Pinot noir, Sauvignon blanc, Syrah) that are now planted throughout the world, as well as wine-making practices and styles of wine that have been adopted in other producing countries. Although some producers have benefited in recent years from rising prices and increased demand for some of the prestige wines from Burgundy and Bordeaux, the French wine industry as a whole has been influenced by a decline in domestic consumption, while internationally, it has had to compete with the increased success of many new world wines

All common styles of wine – red, rosé, white (dry, semi-sweet and sweet),sparkling and fortified – are produced in France. In most of these styles, the French production ranges from cheap and simple versions to some of the world's most famous and expensive examples. An exception is French fortified wines, which tend to be relatively unknown outside France.

In many respects, French wines have more of a regional than a national identity, as evidenced by different grape varieties, production methods and different classification systems in the various regions. Quality levels and prices vary enormously, and some wines are made for immediate consumption while other are meant for long-time cellaring.

If there is one thing that most French wines have in common, it is that most styles have developed as wines meant to accompany food, be it a quick baguette, a simple bistro meal, or a full-fledged multi-course menu.[15] Since the French tradition is to serve wine with food, wines have seldom been developed or styled as "bar wines" for drinking on their own, or to impress in tastings when young.

Grape varieties

Numerous grape varieties are cultivated in France, including both internationally well-known and obscure local varieties. In fact, most of the so-called "international varieties" are of French origin, or became known and spread because of their cultivation in France. Since French appellation rules generally restrict wines from each region, district or appellation to a small number of allowed grape varieties, there are in principle no varieties that are commonly planted throughout all of France.

Most varieties of grape are primarily associated with a certain region, such as Cabernet Sauvignon in Bordeaux and Syrah in Rhône, although there are some varieties that are found in two or more regions, such as Chardonnay in Bourgogne (including Chablis) and Champagne, and Sauvignon blanc in Loire and Bordeaux. As an example of the rules, although climatic conditions would appear to be favorable, no Cabernet Sauvignon wines are produced in Rhône, Riesling wines in Loire, or Chardonnay wines in Bordeaux. (If such wines were produced, they would have to be declassified to Vin de Pays or French table wine. They would not be allowed to display any appellation name or even region of origin.)

Traditionally, many French wines have been blended from several grape varieties. Varietal white wines have been, and are still, more common than varietal red wines.

German wine is primarily produced in the west of Germany, along the river Rhine and its tributaries, with the oldest plantations going back to the Roman era. Approximately 60 percent of the German wine production is situated in the federal state of Rhineland-Palatinate, where 6 of the 13 regions (*Anbaugebiete*) for quality wine are situated. Germany has about 102,000 hectares (252,000 acres or 1,020 square kilometers) of vineyard, which is around one tenth of the vineyard surface in Spain, France or Italy. The total wine production is usually around 9 million hectoliters annually, corresponding to 1.2 billion bottles, which places Germany as the eighth largest wine-producing country in the world. White wine accounts for almost two thirds of the total production.

As a wine country, Germany has a mixed reputation internationally, with some consumers on the export markets associating Germany with the world's most elegant and aromatically pure white wines while other see the country mainly as the source of cheap, mass-market semi-sweet wines such as Liebfraumilch. Among enthusiasts, Germany's reputation is primarily based on wines made from the Riesling grape variety, which at its best is used for aromatic, fruity and elegant white wines that range from very crisp and dry to well-balanced, sweet and of enormous aromatic concentration. While primarily a white wine country, red wine production surged in the

1990s and early 2000s, primarily fuelled by domestic demand, and the proportion of the German vineyards devoted to the cultivation of dark-skinned grape varieties has now stabilized at slightly more than a third of the total surface. For the red wines, Spätburgunder, the domestic name for Pinot noir, is in the lead.

There are 13 defined regions ("Anbaugebiete") in Germany:

1. **Ahr** - a small region along the river Ahr, a tributary of Rhine, that despite its northernly location primarily produces red wine from Spätburgunder.

2. **Baden** - Germany's southernmost, warmest and sunniest wine-growing region, in Germany's southwestern corner, across river Rhine from Alsace, and the only German wine region situated in European Union wine growing zone B rather than A, which results in higher minimum required maturity of grapes and less chaptalisation allowed.Noted for its pinot wines - both red and white. The Kaiserstuhl region in the wine growing region of Baden is Germany's warmest location. One of two wine regions in the federal state of Baden-Württemberg.

3. **Franconia** or *Franken* - around portions of Main river, and the only wine region situated in Bavaria. Noted for growing many varieties on chalky soil and for producing powerful dry Silvaner wines. In Germany, only Franconia and certain small parts of the Baden region are allowed to use the distinctive flattened Bocksbeutel bottle shape.

4. **Hessische Bergstraße** (Hessian Mountain Road) - a small region in the federal state Hesse dominated by Riesling.

5. **Mittelrhein** - along the middle portions of river Rhine, primarily between the regions Rheingau and Mosel, and dominated by Riesling.

6. **Mosel** - along the river Moselle (*Mosel*) and its tributaries, the rivers Saar and Ruwer, and was previously known as*Mosel-Saar-Ruwer*. The Mosel region is dominated by Riesling grapes and slate soils, and the best wines are grown in dramatic-looking steep vineyards directly overlooking the rivers. This region produces wine that is light in body, crisp, of high acidity and with pronounced mineral character. The only region to stick to Riesling wine with noticeable residual sweetness as the "standard" style, although dry wines are also produced.

7. **Nahe** - around the river Nahe where volcanic origins give very varied soils. Mixed grape varieties but the best known producers primarily grow Riesling, and some of them have achieved world reputation in recent years.

8. **Palatinate** or *Pfalz* - the second largest producing region in Germany, with production of very varied styles of wine (especially in the southern half), where red wine has been on the increase. The northern half of the region is home to many well known Riesling producers with a long history, which specialize in powerful Riesling wines in a dry style. Until 1995, it was known in German as *Rheinpfalz*.

9. **Rheingau** - a small region at a bend in the Rhine that provide excellent conditions for wine growing. The oldest documented references to Riesling come from the Rheingau region and it is

the region where many German wine making practices have originated, such as the use of *Prädikat* designations, and where many high-profile producers are situated. Dominated by Riesling with some Spätburgunder. The Rheingau Riesling style is in-between Mosel and the Palatinate and other southern regions, and at its finest combines the best aspects of both.

10. **Rheinhessen** or Rhenish Hesse - the largest production area in Germany. Once known as Liebfraumilch land, but a quality revolution has taken place since the 1990s. Mixed wine styles and both red and white wines. The best Riesling wines are similar to Palatinate Riesling - dry and powerful. Despite its name, it lies in the federal state of Rhineland-Palatinate, not in Hesse.

11. **Saale-Unstrut** - one of two regions in former East Germany along the rivers Saale and Unstrut, and Germany's northernmost wine growing region.

12. **Saxony** or *Sachsen* - one of two regions in former East Germany, in the southeastern corner of the country, along the river Elbe in the federal state of Saxony.

13. **Württemberg** - a traditional red wine region, where grape varieties Trollinger (the region's signature variety), Schwarzriesling and Lemberger outnumber the varieties that dominate elsewhere. One of two wine regions in the federal state of Baden-Württemberg.

Italy is home to some of the oldest wine-producing regions in the world, and Italian wines are known worldwide for their broad variety. Italy, closely followed by France, is the world's largest wine producer by volume. Its contribution is about 45–50 million hl per year, and represents about ⅓ of global production. **Italian wine** is exported around the world and is also extremely popular in Italy: Italians rank fifth on the world wine consumption list by volume with 42 litres per capita consumption. Grapes are grown in almost every region of the country and there are more than one million vineyards under cultivation.

Etruscans and Greek settlers produced wine in Italy before the Romans started their own vineyards in the 2nd century B.C. Roman grape-growing andwinemaking was prolific and well-organized, pioneering large-scale production and storage techniques like barrel-making and bottling

Portuguese wine is the result of traditions introduced to the region by ancient civilizations, such as the Phoenicians, Carthaginians, Greeks, and mostly the Romans. Portugal started to export its wines to Rome during the Roman Empire. Modern exports developed with trade to England after the Methuen Treaty in 1703. From this commerce a wide variety of wines started to be grown in Portugal. And, in 1758, one of the first wine-producing region of the world, the *Região Demarcada do Douro* was created under the orientation of Marquis of Pombal, in theDouro Valley. Portugal has two wine producing regions protected by UNESCO as World Heritage: the Douro Valley Wine Region (*Douro Vinhateiro*) and Pico Island Wine Region (*Ilha do Pico Vinhateira*). Portugal has a big variety of local kinds, producing a very wide variety of different wines with distinctive personality.

Spanish wines (Spanish: *vinos españoles*) are wines produced in the southwestern European country of Spain Located on the Iberian Peninsula, Spain has over 2.9 million acres (over 1.17 million hectares) planted—making it the most widely planted wine producing nation but it is the third largest producer of wine in the world, the largest being France followed by Italy. This is due, in part, to the very low yields and wide spacing of the old vines planted on the dry, infertile soil found in many Spanish wine regions. The country is ninth in worldwide consumptions with Spaniards drinking, on average, 21.6 litres (5.706 US gal) per person a year. The country has an abundance of native grape varieties, with over 400 varieties planted throughout Spain though 80 percent of the country's wine production is from only 20 grapes—including the reds Tempranillo, Garnacha, and Monastrell; the whites Albariño fromGalicia, Palomino, Airen, and Macabeo; and the three cava grapes Parellada,Xarel·lo, and Cariñena.

Major Spanish wine regions include the Rioja and Ribera del Duero which is known for their Tempranillo production; Valdepeñas, drunk by Unamuno andHemingway, known for high quality tempranillo at low prices; Jerez, the home of the fortified wine Sherry; Rías Baixas in the northwest region of Galicia that is known for its white wines made from Albariño and Catalonia which includes the Cava and still wine producing regions of the Penedès as well the Priorat region

4.6 Wine Faults,

A **wine fault** or **defect** is an unpleasant characteristic of a wine often resulting from poor winemaking practices or storage conditions, and leading to **wine spoilage**. Many of the compounds that cause wine faults are already naturally present in wine but at insufficient concentrations to adversely affect it. In fact, depending on perception, these concentrations may impart positive characters to the wine. However when the concentration of these compounds greatly exceeds the sensory threshold, they replace or obscure the flavors and aromas that the wine should be expressing (or that the winemaker wants the wine to express). Ultimately the quality of the wine is reduced, making it less appealing and sometimes undrinkable.

There are many causes for the perception in wine faults, including poor hygiene at the winery, excessive and/or insufficient exposure of the wine to oxygen, excessive or insufficient exposure of the wine to sulphur, overextended maceration of the wine either pre- or post-fermentation, faulty fining, filtering and stabilization of the wine, the use of dirty oak barrels, over-extended barrel aging and the use of poor quality corks. Outside of the winery, other factors within the control of the retailer or end user of the wine can contribute to the perception of flaws in the wine. These include poor storage of the wine that exposes it to excessive heat and temperature fluctuations as well as the use of dirty stemware during wine tasting that can introduce materials or aromas to what was previously a clean and fault-free wine.

The vast majority of wine faults are detected by the nose and the distinctive aromas that they give off. However, the presence of some wine faults can be detected by visual and taste

perceptions. For example, premature oxidation can be noticed by the yellowing and browning of the wine's color. The sign of gas bubbles in wines that are not meant to besparkling can be a sign of refermentation or malolactic fermentation happening in the bottle. Unusual breaks in the color of the wine could be a sign of excessive copper, iron or proteins that were not removed during fining or filtering. A wine with an unusual color for its variety or wine region could be a sign of excessive or insufficient maceration or as well as poor temperature controls during fermentation. Tactile clues of potential wine faults include the burning, acidic taste associated with volatile acidity that can make a wine seem out of balance.

Wine fault	**Characteristics**
Acetaldehyde	Smell of roasted nuts or dried out straw. Commonly associated with Sherries where these aromas are considered acceptable
Amyl-acetate	Smell of "fake" candy banana flavoring
Brettanomyces	Smell of barnyards, fecal and gamey horse aromas
Cork taint	Smell of a damp basement, wet cardboard or newspapers and mushrooms
Butyric acid	Smell of rancid butter
Ethyl acetate	Smell of vinegar, paint thinner and nail polish remover
Hydrogen sulfide	Smell of rotten eggs or garlic that has gone bad
Iodine	Smell of moldy grapes
Lactic acid bacteria	Smell of sauerkraut
Mercaptans	Smell of burnt rubber and/or cooked cabbage
Oxidation	Smell of cooked fruit and walnuts. Also detectable visually by premature browning or yellowing of the wine
Sorbic acid plus lactic acid bacteria	Smell of crushed geranium leaves
Sulfur dioxide	Smell of burnt matches. Can also come across as a pricking sensation in the nose.

4.7 Wine tasting

Wine tasting (often, in wine circles, simply **tasting**) is the sensory examination and evaluation use a constantly evolving formal terminology which is used to describe the of wine. While the practice of wine tasting is as ancient as its production, a more formalized methodology has slowly become established from the 14th century onwards. Modern, professional wine tasters (such as sommeliers or buyers for retailers) range of perceived flavors, aromas and general

characteristics of a wine. More informal, recreational tasting may use similar terminology, usually involving a much less analytical process for a more general, personal appreciation

he results of the four recognized stages to wine tasting:

- appearance
- "in glass" the aroma of the wine
- "in mouth" sensations
- "finish" (aftertaste)

– are combined in order to establish the following properties of a wine:

- complexity and character
- potential (suitability for aging or drinking)
- possible faults

A wine's overall quality assessment, based on this examination, follows further careful description and comparison with recognized standards, both with respect to other wines in its price range and according to known factors pertaining to the region or vintage; if it is typical of the region or diverges in style; if it uses certain wine-making techniques, such as barrel fermentation or malolactic fermentation, or any other remarkable or unusual characteristics.

Whereas wines are regularly tasted in isolation, a wine's quality assessment is more objective when performed alongside several other wines, in what are known as tasting "flights". Wines may be deliberately selected for their vintage ("horizontal" tasting) or proceed from a single winery ("vertical" tasting), to better compare vineyard and vintages, respectively. Alternatively, in order to promote an unbiased analysis, bottles and even glasses may be disguised in a "blind" tasting, to rule out any prejudicial awareness of either vintage or winery.

Blind tasting

To ensure impartial judgment of a wine, it should be served *blind* — that is, without the taster(s) having seen the label or bottle shape. Blind tasting may also involve serving the wine from a black wine glass to mask the color of the wine. A taster's judgment can be prejudiced by knowing details of a wine, such as geographic origin, price, reputation, color, or other considerations.

Scientific research has long demonstrated the power of suggestion in perception as well as the strong effects of expectancies. For example, people expect more expensive wine to have more desirable characteristics than less expensive wine. When given wine that they are falsely told is expensive they virtually always report it as tasting better than the very same wine when they are told that it is inexpensive. French researcher Frédéric Brochet "submitted a mid-range Bordeaux in two different bottles, one labeled as a cheap table wine, the other bearing a grand cru

etiquette." Tasters described the supposed grand cru as "woody, complex, and round" and the supposed cheap wine as "short, light, and faulty."

Similarly, people have expectations about wines because of their geographic origin, producer, vintage, color, and many other factors. For example, when Brochet served a white wine he received all the usual descriptions: "fresh, dry, honeyed, lively." Later he served the same wine dyed red and received the usual red terms: "intense, spicy, supple, deep."

One of the most famous instances of blind testing is known as the Judgment of Paris, a wine competition held in 1976 where French judges blind-tested wines from France and California. Against all expectations, California wines bestedFrench wines according to the judges, a result which would have been unlikely in a non-blind contest. This event was depicted in the 2008 movie *Bottle Shock*.

Another well-publicized double-blind taste test was conducted in 2011 by Prof. Richard Wiseman of the University of Hertfordshire. In a wine tasting experiment using 400 participants, Wiseman found that general members of the public were unable to distinguish expensive wines from inexpensive ones. "People just could not tell the difference", said Wiseman, "between cheap and expensive wine".

Vertical and horizontal tasting

Vertical and horizontal wine tastings are wine tasting events that are arranged to highlight differences between similar wines.

- In a **vertical tasting**, different vintages of the same wine type from the same winery are tasted. This emphasizes differences between various vintages.

- In a **horizontal tasting**, the wines are all from the same vintage but are from different wineries. Keeping wine variety or type and wine region the same helps emphasize differences in winery styles.

Tasting flights

Tasting flight is a term used by wine tasters to describe a selection of wines, usually between three and eight glasses, but sometimes as many as fifty, presented for the purpose of sampling and comparison.

Tasting notes

A **tasting note** refers to a taster's written testimony about the aroma, taste identification, acidity, structure, texture, and balance of a wine. Online wine communities like Bottlenotes allow members to maintain their tasting notes online and for the reference of others.

Serving temperature

The temperature that a wine is served at can greatly affect the way it tastes and smells. Lower temperatures will emphasize acidity and tannins while muting the aromatics. Higher temperatures will minimize acidity and tannins while increasing the aromatics.

Wine type	**Examples**	**Temperature (Celsius)**	**Temperature (Fahrenheit)**
Light bodied sweet dessert wines	Trockenbeerenauslese, Sauternes	6–10 °C	43–50 °F
White sparkling wines	Champagne	6–10 °C	43–50 °F
Aromatic, light bodied white	Riesling, Sauvignon blanc	8–12 °C	46–54 °F
Red sparkling wines	Sparkling Shiraz, some frizzanteLambrusco	10–12 °C	50–54 °F
Medium bodied whites	Chablis, Semillon	10–12 °C	50–54 °F
Full bodied dessert wines	Oloroso Sherry, Madeira	8–12 °C	46–54 °F
Light bodied red wines	Beaujolais, Provence rosé	10–12 °C	50–54 °F
Full bodied white wines	Oaked Chardonnay, Rhone whites	12–16 °C	54–61 °F

Medium bodied red wines	Grand Cru Burgundy, Sangiovese	14–17 °C	57–63 °F
Full bodied red wines	Caberne Sauvignon, Nebbiolo based wines	15–18 °C	59–64 °F

4.8 Storage and care of wine

Proper care and storage of wine is an important aspect of your home bar. Entertaining is usually the primary goal for having a bar in your home and keeping a variety of wines on hand to suit individual palettes, pair with particular foods and match different occasions is desired for convenience and allows accommodating the tastes of many guests.

Several factors need consideration to minimize or avoid adverse affects while storing wine. The best way will be determined largely by intended storage time and overall goals. Light, temperature, humidity and bottle orientation play a prominent role. While wine consumed within days or weeks after purchase will benefit slightly from attention to these details, hobbyists and collectors who store wine for months or years will want to try to achieve storage conditions closer to ideal for optimal results. Large storage quantities or those caring for rare or expensive vintages may find a dedicated wine cellar the best solution.

4.9 Question

1. Write about the Principal of wine regions?
2. What is the wine laws?
3. Written a short note on grape varieties?
4. Write about the production and brand names?
5. Write a short note on Wine faults?
6. What is the Wine tasting?
7. Write a short note on Storage and care of wine?
8. Write about Wine Terminology?

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UNIT 5

NEW WORLD WINES

Structure

5.0 Objective

- Student knows about the Principal wine regions.
- Student knows about the wine laws.
- Student knows about grape varieties.
- Student knows about the production and brand names of wine.
- Student knows about the Food and wine Harmony.

5.1 Introduction

New World wines are those wines produced outside the traditional wine-growing areas of Europe and the Middle East, in particular from Argentina, Australia, Chile, New Zealand, South Africa and the United States. **Wine** is an alcoholic beverage made from fermented grapes or other fruits. The natural chemical balance of grapes lets them ferment without the addition of sugars, acids, enzymes, water, or other nutrients. Yeast consumes the sugars in the grapes and converts them into alcohol and carbon dioxide. Different varieties of grapes and strains of yeasts produce different styles of wine. The well-known variations result from the very complex interactions between the biochemical development of the fruit, reactions involved in fermentation, terroir and subsequent appellation, along with human intervention in the overall process.

The alcohol in wine is a psychoactive drug, as is true for all alcoholic beverages, commonly used for its intoxicating effects today and throughout history. The psychoactive effects of wine are evident at the normal serving size.

Wines made from produce besides grapes are usually named after the product from which they are produced (for example, rice wine, pomegranate wine, apple wine and elderberry wine) and

are generically called fruit wine. The term "wine" can also refer to starch-fermented or fortified beverages having higher alcohol content, such as barley wine, huang jiu, and rice wines such as mijiu and sake.

Wine has a rich history dating back thousands of years, with the earliest traces so far discovered having occurred c. 6000 BC in Georgia. It had reached the Balkans by c. 4500 BC and was consumed and celebrated in ancient Greece and Rome.

Since its earliest appearance in written records, wine has also played an important role in religion. Red wine was closely associated with blood by the ancient Egyptians, who, according to Plutarch, avoided its free consumption as late as the 7th-century BC Saite dynasty, "thinking it to be the blood of those who had once battled against the gods". The Greek cult and mysteries of Dionysus, carried on by the Romans in their Bacchanalia, were the origins of western theater. Judaism incorporates it in the Kiddush and Christianity in its Eucharist, while alcohol consumption is forbidden in Islam.

5.2 Facts file

Early wines in the Americas

Alcoholic beverages were made by indigenous peoples of the Americas before the Age of Discovery. Indigenous peoples are known to have used maize, potatoes, quinua, pepper tree fruits and strawberries to make alcoholic beverages. Despite the existence of species of the *vitis* genus (to which *Vitis vinifera* belongs) in Venezuela, Colombia, Central Americaand Mexico indigenous peoples did not ferment these species and therefore did not make wine.

Spanish settlers in the Americas initially brought Old World animals and plants to the Americas for self-consumption in their attempt to reproduce the diet they had in Spain and Europe. A further stimulus for the production of New World wine in Spanish America might have been that European wines exported to the Americas were in general not transported in bottles nor sealed with cork which made them prone to be sour.

Attempts to grow vines in the Americas began in Hispaniola during the second voyage of Columbus in 1494. Ferdinand II of Aragon, King of Spain, banned the planting of vines in Hispaniola in 1503. After the establishment of vines in Hispaniola in early 16th century vineyards were successfully established in Mexico in 1524. Hernán Cortés, conqueror of Mexico, promoted the establishment of vines and made it in 1524 a requirement for Spanish settlers that wanted to acquire land in the Mexican Plateau to establish vineyards in their lands. The growing of vines in Peru is known to have been ventured by Bartolomé de Terrazas and Francisco de Carabantes in the 1540s. The latter established vineyards in Ica from where vines then were taken into Chile and Argentina.

The most common of the early grapes was a black grape called *Mission* (Spanish: Misión) which was planted in Mexico and subsequently also in Texas, and later in California. Grapes of the

same stock were planted in Peru where it received the name *Negra peruana* (Peruvian black) and from this came the most common Chilean grape: the *País*. This Chilean grape was introduced into what is now Argentina where it came to be known as *Criolla chica*. These grapes are supposed to have originated from Spain but there is also a possibility that they originated from Italy as they resemble very much the variety *Mónica* grown in Sardinia as well as Spain.

In the second half of the 16th century, the demand for wine among Spanish settlers caused a surge in Spanish wine exports to Mexico and Cuba. However, this was not the case for Peru, Chile, and Argentina, where cultivation of vineyards had proven to be a success and, thus, required fewer imports of Spanish wines. Relative to Peru and Chile, Spanish settlers in the Mexico established only very few vineyards.

In the 16th and 17th century the principal wine growing area of the Americas was in the central and southern coast of Peru, specifically in the area of Ica and Pisco Apart from Peru and Chile Paraguay developed despite its high temperatures into a wine-making area in the 16th century. Hernando Arias de Saavedra who visited the city of Asunción in 1602 said there was 187 vineyards totalling 1.768.000 individual plants. Other sources cite 2.000.000 and 1.778.000 plants around the same time. Paraguayan wine was exported downstream to Santa Fe and from there to the Platine market. Paraguayan wine is also known to have reached Córdoba in central Argentina.

Changes in the Americas and opening of South Africa

In 1595 the Spanish Crown banned the establishment of new vineyards in the Americas, but this order was largely ignored. The ban sought to protect Iberian wine from competition by Peruvian wine and can be considered an example of commodity mercantilism. Moreover the Spanish Crown banned the export of Peruvian wine to Panamá and Guatemala in 1614 and 1615 respectively. The enforcement of the restrictions on wine growth and trade in the Spanish Empire was in general lax. The only market in the Americas the Spanish Crown managed —to some degree— to secure for Iberian wine was Mexico.

The growth of mining in Potosí in present-day Bolivia, which became the largest city in the Americas in the 17th century, created a constant demand for wine which was supplied mainly from Peru. In Potosí part of salaries were paid with wine. Furthermore Peruvian wine growers supplied the city of Lima, the most important political centre in South America in the 16th and 17th centuries. In Chile wine demand was guaranteed by the Army of Arauco, a permanent army financed with silver from Potosí which fought nativeMapuches. In the view that Parauguayan wine could not compete in these three markets Paraguayans abandoned wine growing and sought instead income from tobacco and yerba mate exports.[6] In the 18th century practically no wine-growing occurred in Paraguay.

In 1687 the whole southern coast of Peru was struck by the 1687 Peru earthquake which destroyed the cities of Villa de Pisco and Ica. The earthquake destroyed wine cellars and mud containers used for wine storage. This event marked the end of the Peruvian wine-

boom. Thesuppression of the Society of Jesus in Spanish America in 1767 caused the Jesuit vineyards in Peru to be auctioned at high prices but new owners did not had the same expertise as the jesuits contributing to a production decline. Peruvian wine-making was further challenged by the fact that production of pisco, also made from grapes, rose from being exceed in the early 18th century by wine to represent 90% of the grape beverages prepared in Peru in 1764.Even after the shift to pisco making did vineyards in Peru encountered economic troubles since in the late 18th century the Spanish Crown lifted the ban on the production of rum in Peru which was cheaper and but of lower quality than pisco.

The decline of Peruvian wine even caused Peru to import some wine from Chile as it happened in 1795 when Lima imported 5.000 troves (Spanish: *botijas*) from Concepción in southern Chile. This particular export showed the emergence of Chile relative to Peru as a wine-making region. Eduard Friedrich Poeppig claimed as some other did before him that the wine from Concepción were the bests of Chile, this was likely due the less arid climate of southern Chile.

The New World imported wine from the early days of European colonisation, particularly for religious purposes. Perhaps the first significant example of the trade going the other way was Constantia from South Africa, which by the 18th century had become a firm favourite among European royalty.

4.3 Principal wine regions

Argentina

70% of Argentina's vineyards are located in the state of Mendoza, which lies under the Andes Mountains and is geographically located on the same latitude as Morocco. A unique intricate system of irrigation, which is supplied from the melted snows of the Andes Mountains by a network of canals begun by the native Indians a thousand years ago (which included a legal framework for equitably dividing water rights, that subsequent generations have luckily inherited), coupled with balanced temperatures and little or no disease ensures that crops are huge. The average crop produces an amazing 70 hectolitres. The vineyards of Argentina lie above 500 metres above sea level with the exception of Salta (in the sub tropical north), which is close to the town of Cafayate those vineyards reach a height to 2,000 metres. The majority of the vineyards are planted in the parral, or pergola system because of the heat, this helps keep the grapes away from the scorching ground heat. The best vineyards are located near the Andes, due to the unique canal system and high altitudes between 600 to 950 metres. Phylloxera is controlled in Argentina by flooding the vineyards with water from big dams located in the Andes Mountains. Major regions Argentina was the first South American country to introduce a DOC system in 1992. Mendoza: only region with a hierarchy of appellations, divided into five regions and a larger number of departments and then subdivisions. San Juan: warmer climates produces light wines, lots of vermouths and grape concentrate.

Famatina: far north, very hot contains co-operative cellars, the La Rioja province wines although popular are labelled Famatina Valley because of Spain.

Cafayate: the Torrontes (white) grape reigns here in this Salta province. High growing altitudes help develop aromas and flavours. Cabernet Sauvignon also grows well here.
Rio Negro: located in the far south, this cool region produces a lot of Malbec The best vineyards are to the south and close to the sea. Australia's red and white wines display a delicate fruity softness, which is ideal for immediate consumption. The climate is Mediterranean, with cooler areas found at altitude or close to the coast. Drought can be the biggest problem. Weather can also cause vintage

5.4 Wine Laws

Wine laws are legislation regulating various aspects of production and sales of wine. The purpose of wine laws includes combating wine fraud, by means of regulated protected designations of origin, labelling practices and classification of wine, as well as regulating allowed additives and procedures in winemaking and viticulture. Legislation affecting all kinds ofalcohol beverages, such as the legal drinking age and licensing practices related to distribution and sales, are usually not considered wine laws.

Wine is regulated by regional, state, and local laws. The laws and their relative rigidity differ for New World and Old World wines. Old World wines tend to have more stringent regulations than New World wines. Various wine laws, however, may include appellation-based regulations that cover boundaries as well as permitted grape varieties and winemaking practice-such as the French *Appellation d'origine contrôlée* (AOC), Italian *Denominazione di origine controllata* (DOC), Spanish *Denominación de Origen* (DO) and Portuguese *Denominação de Origem Controlada* (DOC). In some New World wineregions, such as the United States and Australia, the wine laws of the appellation systems (American Viticultural Area (AVA) and Australian Geographical Indication (GIs)) only pertain to boundary specifics and guaranteeing that a certain percentage of grapes come from the area listed on the wine label.

Some wine laws are established by local governments and are specific to that wine region, such as the 1954 municipaldecree in the village of Châteauneuf-du-Pape that banned the overhead flying, landing or taking off of aviation in the commune which could negatively affect the region's vineyards and wine production

Comparative wine laws

European Union

In the European Union (EU), much of the wine law is common to all countries through the European Union wine regulations which is a part of the Common Agricultural Policy (CAP). The CAP Wine Regime consists of a set of rules that govern the wine sector, with the aim of achieving a balanced and open market. The principal features are rules governing production,oenological practices and processes, classification of wines, a range of

structural and support measures, detailed rules governing the description and labeling of wines, and imports from non-EU countries.

In addition to regulations that apply to all EU members, each EU country has its own framework of laws which govern aspects of winemaking such as the percentage of a grape to be included in a wine labeled with that variety name. For instance, in France wine professionals acribe to the Appellation d'Origine Contrôlée (AOC) system, which guarantees the origin of wine and other food products, such as cheese.

United States

In the United States, the wine laws are more flexible than European standards in regards to regulations on what viticultural and winemaking practice are allowed in each wine region. The Bureau of Alcohol, Tobacco, Firearms and Explosives(BATF) defines and approves applications for regions to become American Viticultural Areas. This system was established in 1978 with the Augusta AVA in Missouri designated as the first recognized AVA on June 20, 1980. A sizable portion of American wine laws relate to wine labelling practices and include the stipulations that if an AVA name appears on the label that at least 85% of grapes used to produce the wine must come from that AVA. In addition to AVAs, every Americanstate and county can produce wine and label it under their state/county wide appellation provided at least 75% of the grapes come from that area. The state of California and Texas have wine laws increasing the requirement to 100% and 85%, respectively, for use of a state-wide appellation on the wine label.

The appearance of grape variety (or varietal) and vintage year is also regulated by US wine labeling laws with requirements of at least 75% for the grape variety and 95% being harvested in that vintage year for either to appear on the wine label. The state of Oregon has increased the restriction for grape variety to 90%, with exception of Cabernet Sauvignon which under Oregon wine laws can have a minimum 75%. Additionally, all US wine must include the Surgeon General warning about dangers associated with alcohol consumption and a warning about the possible use of sulfites. Several wineries and importers have had conflicts with the BATF over these labeling requirements, one notable example being the importerKermit Lynch. The criticism is typically centered on the absence of inclusion about the potential positive aspects of moderate wine consumption (such as the so-called "French paradox") and that many wineries are forced to label their wines as "containing sulfites" when the decision to use sulfites are normally not made until long after wine labels have been ordered and the finished wine may contain no added sulfites

5.5 Grape Varieties

Malbec (Mendoza, Rio Negro) produces full-bodied, bramley red wines with the dark purple colour, rich tannins, peppery and spicy flavours. The most widely planted grape variety, once dominant in Bordeaux and flourishing as Auxerrois in Cahors, in Argentina it produces top rich red wine Torrontes (Cafayate) produces full-bodied, dry white wines with Muscat-like aromas. Argentina's indigenous white variety, popular and very easy to drink, both for old-style brownish

wines and fruiter modern ones. Cabernet Sauvignon, Syrah, Merlot (Cafayate, Mendoza) planted widely for red wines. Chardonnay and Viognier (Mendoza) for white wines. Criolla and Cereza used for basic, local market table wine or in some cases grape concentrates. Although there are about 90 different grape varieties planted commercially in Australia the main grape varieties grown are:
White: Semillion, Riesling, Chardonnay, Muscat Gordo Blanco, Sauvignon Blanc, Colombard, Verdelho.

Black: Shiraz, Cabernet Sauvignon, Merlot, Pinot Noir, Ruby Cabernet, Grenache, Mataro (Mourvedre), Cabernet Franc.

5.6 Production and Brand names –California, Australia, India, Chile, South Africa, Algeria, New Zealand

Argentina

Argentina is the worlds fifth biggest wine producer though it has traditionally had a high domestic consumption (in 2006, Argentines averaged over 40 litres per capita in one year). It has a long tradition of winemaking under the Spanish, going back to 1557, but the industry has been influenced by more recent immigrants, notably Italians and also Germans. Exports increased during the mid-1990s following the success of their neighbours in Chile, and accelerated after the economic crisis of 2002.

The long history of viticulture in Argentina has brought forth the evolution of many local varieties, but perhaps the most typically Argentine grape is the Torrontés, which makes an aromatic white wine. However, Argentines love red wine to go with their famous steaks. Malbec has proven to be the most successful variety in export markets, with Barbera and "Bonarda" (now known to be Corbeau, a minor variety from Savoie) being blended into more affordable wines.

The Mendoza Province, which is Argentina's main producer, has also gained recognition from the wine tourism business due to important investments in new wineries and hotel accommodations. Other producing areas include San Juan, Salta,La Rioja, Catamarca, Rio Negro and the Buenos Aires wine region.

Australia

Vine cuttings from South Africa were brought on the First Fleet (1788), and though the settlers took a while to get to grips with the new conditions, wine exports began in 1822. As mentioned above, by the 1880s Australian wines were winning prizes in Europe. Phylloxera struck in eastern winegrowing regions from the 1870s, leading to the destruction of many vineyards, however with South Australia free from Phylloxera it contains some of the oldest continuously vineyards on earth.

Penfolds Grange and others led the revival of interest in table wines, which culminated in 2000, when Australia sold more wine to the United Kingdom than did France.

While some Australian wines, their Chardonnays in particular, have previously been criticized for being over-oaked and over-ripe, Australian winemaking is now some of the most sophisticated in the world, with vineyards increasingly planted in cooler climates, such as Pinot noir in Tasmania, and unoaked wines becoming popular. Several regional specialities have emerged, notably Shiraz in the Barossa Valley, Cabernet Sauvignon in Coonawarra, Riesling in the Eden Valley and Clare Valley, and Hunter Valley Sémillon. Rutherglen Muscats are perhaps the finest fortified wines of the New World.

Canada

Canada followed a similar path to the eastern United States - early attempts to grow *Vitis vinifera* failed, leading to a significant export industry based on *Vitis labrusca* and *Vitis riparia*, fortified to disguise the 'foxy' aromas. The country had its own version of Prohibition until 1927, and after it ended red tape inhibited the industry until 1974. In the following years improved viticulture and grape varieties allowed a substantial expansion of the industry in the 1990s, centered around the parts of Southern Ontario warmed by the Great Lakes, and in the Okanagan Valley of southern British Columbia. While there has been some progress with red wines from the Bordeaux varieties and Pinot noir, Canada's most successful wines are ice wines made from grapes such as Riesling, Vidal, and even Cabernet Franc.

Chile

As in Argentina, Chilean viticulture dates back to the Conquistadores. The Bordeaux varieties arrived in the mid-19th century, although for a long time many of the vines thought to be Merlot were in fact Carmenère, and the latter has become something of a signature grape. It is the tenth biggest producer of wine in the world; traditionally quantity was favored over quality, and red tape discouraged improvement. Under the Pinochet reforms of the 1980s, investments were made in wineries and vineyards, and exports began in earnest in the mid-1990s. Traditionally Chilean vineyards were in semi-arid areas irrigated by water from the Andes, but there has been increasing interest in cooler areas such as the Lleyda Valley (becoming known for its Pinot noir) and the Bío-Bío Valley, which suits Riesling and Gewurztraminer.

Chile is notable for being one of the few vine-growing regions to be free of phylloxera.

Mexico

Mexico is the oldest wine-making region in the Americas.

In 1549, Spanish explorers and settlers came across a fertile valley in the present-day state of Coahuila where they encountered native vines and founded the Mission of Santa María de las Parras or "Holy Mary of the Vines". In 1597, the Hacienda de San Lorenzo was established by the Spanish settler Don Lorenzo García, where he founded, along with other Spanish missionaries, Casa Madero - the oldest winery house in the Americas.

Many of the vines from Parras de la Fuente, Coahuila and other places in Mexico were the first to be exported and cultivated in what is now California, as well as other provinces in

Northern New Spain and other Spanish colonies in South America. In 1699, the King of Spain- alarmed by competition from the New World- prohibited wine production in New Spain, with the exception of wines for the church. The prohibition lasted until the Mexico's independence from Spain in 1810.

As of the 2013, about 90% of Mexican wine is produced in the northwestern state of Baja California, neighboring the wine producing region of California in the U.S., particularly in the Valley of Guadalupe, Ensenada Municipality.

New Zealand

New Zealand viticulture was started in a small way by Croatian immigrants at the end of the 19th century, but it was not until the 1970s that it really got going. Several factors came together at that time - Britain's entry into the European Economic Community in 1973 ended favorable terms of agricultural trade, whilst New Zealanders themselves developed a taste for wine as local drinking laws changed and cheap air travel exposed them to different cultures.

Various grapes were tried in the early years, but it was in the 1980s that New Zealand developed the pungent style of Sauvignon blanc that became her trademark. Since then the Burgundy grapes of Chardonnay and Pinot noir have been developed in cooler, more southerly vineyards, with considerable success. More recently there has been a fad for the 'aromatic' white varieties such as Gewurztraminer and Riesling, with even Auslese styles being attempted.

Peru

The first grapevines were brought to Peru shortly after its conquest by Spain. Spanish chroniclers from the time note that the first vinification in South America took place in the *hacienda* Marcahuasi of Cuzco. However, the largest and most prominent vineyards of the 16th and 17th century Americas were established in the Ica valley of south-central Peru. In the 1540s, Bartolomé de Terrazas and Francisco de Carabantes began vineyards in Peru. The latter established vineyards in Ica, which Spaniards from Andalucia and Extremadura used to introduce grapevines into Chile.

In 1687 the whole southern coast of Peru was struck by the 1687 Peru earthquake which destroyed the cities of Villa de Pisco and Ica. The earthquake destroyed wine cellars and mud containers used for wine storage. This event marked the end of the Peruvian wine-boom.

In 2008, there were some 14,000 hectares (35,000 acres) of grape plantations in Peru, including table grapes, and some 610,000 hectolitres (13,000,000 imp gal; 16,000,000 US gal) of wine was produced, with an increasing trend in both plantations and wine production. Most vineyards are located on the central coast, around Pisco and Ica, where most of Peru's winemaking and distillation takes place.

South Africa

Wine was first produced in South Africa by the founder of Cape Town in 1659, and by the late 18th century Constantia, made from Muscat de Frontignan (Muscat Blanc à Petits Grains), was

popular among European royalty. However the vineyards were decimated by phylloxera and the KWV cooperative that ran most of the industry under apartheid gave little encouragement to produce quality wine. The end of apartheid sparked a wave of investment and innovation in the vineyards of the Cape, although there remains large areas of undistinguished grape varieties such as Colombard.Stellenbosch and Paarl can produce world-class wines from the Bordeaux varieties, Shiraz and also from Pinotage, a variety bred locally from Pinot noir and Cinsaut. South Africa is also the second home of Chenin blanc, known as Steen;Muscat Blanc à Petits Grains is known locally as red and white Muscadel, and is once again being used to make Constantia.

United States

Although wine is made throughout the United States, 90% of it comes from California. The Gallo Winery runs an industrial facility in Modesto, California that produces the majority of the state's wine exports. Most of the rest is split between Washington and New York state, followed by Oregon. California's earliest grape vines were imported from *New Spain*, or Mexico, which in turn were brought by Spanish explorers and settlers. North America has several native species of *Vitis*, from which wine has been made for a long time in the east of the country, although the 'foxy' aromas of wines produced from these species are not to everyone's taste. The Catawba variety led the way for winemaking from native species, first in Ohio and later in the Finger Lakes area of New York state. California followed a similar path to Latin American countries, with Spanish missionaries starting the first vineyard of *vinifera* vines in 1769, and later immigrants from Bordeaux and Italy bringing their native grapes with them. Soon a thriving industry developed, particularly in the Napa Valley, which was stopped in its tracks by phylloxera and, uniquely, Prohibition (1920–1933).

One interesting consequence of Prohibition was that vineyards were replanted with lower quality grapes such as Alicante Bouschet that could survive transportation to home winemakers, and this tradition of home winemaking changed taste preferences from a dry style before Prohibition to a much sweeter style. In general Prohibition had a devastating effect on commercial winemaking in the country, which only started to recover in the late 1960s and 1970s under major industry pioneers such as Ernest and Julio Gallo, Robert Mondavi and the world-class viticultural scientists at the University of California, Davis. The latter institution has played a leading role in the recovery of wine in the United States, in particular identifying just what vines were actually planted (notably California's signature grape, the robust red Zinfandel, which was found to be Croatia's Crljenak Kaštelanski), and encouraging the use of better clones of the traditional European varieties. In the 1970s, geographical appellations were designated as American Viticultural Areas.

In the years after Prohibition, the domestic market demanded cheap 'jug wines' and sweet fortified wines. These tastes led to local styles such as White Zinfandel (a sweet rosé) and "bum wines". Interest in traditional European varieties increased after Mondavi reinvented Sauvignon blanc in a dry, heavily oaked style called Fumé Blanc, leading to the innovations that triumphed

so spectacularly in Paris in 1976. While California is known for its Cabernet Sauvignon, Zinfandel and Chardonnay in particular, it produces such a massive amount of wine that just about every grape variety ends up being grown there to a greater or lesser extent. For instance, the "Rhone Rangers" have raised awareness of the Rhone varieties, notably Viognier, and there has been speculation that climate change will force California to look further south in Europe for grape varieties. The Northwest states of Oregon and Washington are known for their Pinot noirs, and rieslings while New York state continues to produce wine mostly from *Vitis labrusca* varieties and hybrids.

5.7 Food and wine Harmony

Wine and food matching is the process of pairing food dishes with wine to enhance the dining experience. In many cultures, wine has had a long history of being a staple at the dinner table and in some ways both the winemaking and culinary traditions of a region will have evolved together over the years. Rather than following a set of rules, local cuisines were paired simply with local wines. The modern "art" of food pairings is a relatively recent phenomenon, fostering an industry of books and media with guidelines for pairings of particular foods and wine. In the restaurant industry, sommeliers are often present to make food pairing recommendations for the guest. The main concept behind pairings is that certain elements (such as texture and flavor) in both food and wine interact with each other, and thus finding the right combination of these elements will make the entire dining experience more enjoyable. However, taste and enjoyment are very subjective and what may be a "textbook perfect" pairing for one taster could be less enjoyable to another.While there are many books, magazines and websites with detailed guidelines on how to pair food and wine, most food and wine experts believe that the most basic element of food and wine pairing is understanding the balance between the "weight" of the food and the weight (or body) of the wine. Heavy, robust wines like Cabernet Sauvignon can overwhelm a light, delicate dish like a quiche while light bodied wines like Pinot Grigio would be similarly overwhelmed by a hearty stew. Beyond weight, flavors and textures can either be contrasted or complemented. From there a food and wine pairing can also take into consideration the sugar,acid, alcohol and tannins of the wine and how they can be accentuated or minimized when paired with certain types of food

While it is often said that "taste is subjective", there are quantifiable taste characteristics (like bitter, sweet, salty or sour) that can be perceived and measured as low, moderate or high—such as measuring the sweetness of honey or the saltiness of oysters. Flavors, such as butterscotch, char and strawberry, are more personal and can't be quantifiable. Flavors are either perceived to be present or not. The perception of flavors is linked to our sense of smell, while tastes come from the sensory glands of the taste buds. Though individual sensitivity to the different taste "senses" can vary, wine experts will often recommend pairings based on these more objective measurements rather than the more subjective concept of "flavors". In wine there are three basic tastes-bitter, sweet and sour. These three tastes can each be identified with a primary component of the wine-tannins (bitter), residual sugar (sweet) and acidity (sour). A

fourth component, alcohol, is identified in wine tasting with a perception of "heat" or hotness in the back of the mouth and is the primary factor influencing the body of the wine. The residual heat of the alcohol can be considered in food pairing with some ingredients minimizing the heat of the wine while some will accentuate it.

Acidity

Acidity is a dominant player in any food and wine pairing due to the pronounced and complex ways that it can heighten the perception of flavors. In wine tasting, acidity is perceived by a mouth watering response by the salivary glands. This mouth watering can also serve to stimulate the appetite. In wine there are three main acids that have their own associated flavors-malic (green apples), lactic (milky) andtartaric (bitter). In dishes that are fatty, oily, rich or salty, acidity in wine can "cut" (or standout and contrast) through the heaviness and be a refreshing change of pace on the palate. In cooking, acidity is often used in similar fashions such as a lemon wedges with a briny seafood dish such as oysters. The acidity of the lemon juices can make the oysters seem less briny. A wine that is less tart than the dish it is served with will taste thin and weak. A wine that comes across as "too tart" on its own may seem softer when paired with an acidic and tart dish. The complementing "tartness" of the food and wine cancels each other out and allows the other components (fruit of the wine, other flavors of the food) to be more noticeable

Sweetness

The sweetness of wines is determined by the amount of residual sugar left in the wine after the fermentation process. Wines can be bone dry (with the sugars fully fermented into alcohol), off-dry (with a hint of sweetness), semi-dry (medium-sweet) and dessert level sweetness (such as the high sugar content in Sauternes and Tokays). Sweet wines often need to be sweeter than the dish they are served with. Vintage brut champagne paired with sweet, wedding cake can make the wine taste tart and weak while the cake will have off flavors. In food pairings, sweetness balances spice and heat. It can serve as a contrast to the heat and alleviate some of the burning sensation caused by peppers and spicy Asian cuisine. It can accentuate the mild sweetness in some foods and can also contrast with salt such as the European custom of pairing salty Stilton cheese with a sweet Port. Sweetness in a wine can balance tartness in food, especially if the food has some sweetness (such as dishes with sweet & sour sauces).

Bitterness

The astringency associated with wine is usually derived from a wine's tannins. Tannins add a gritty texture and chalky, astringent taste. It can enhance the perception of "body" or weight in the wine. Tannins are normally derived from the skins, seeds, and stems of the grapes themselves (leeched out during the maceration process) or from contact with oak during barrel aging. Tannins react with proteins. When paired with dishes that are high in proteins and fats (such as red meat and hard cheeses), the tannins will bind to the proteins and come across as softer. In the absence of protein from the food, such as some vegetarian dishes, the tannins will react with the

proteins on the tongue and sides of the mouth—accentuating the astringency and having a drying effect on the palate. Various cooking methods, such as grilling and blackening can add a bitter "char" component to the dish that will allow it to play well with a tannic wine. While fish oils can make tannic wines taste metallic or off. Astringent tannic wines like Barolo and Cabernet Sauvignon can overwhelm a lot of foods but can be soften by fatty foods with a lot of proteins such as hard cheeses or meats. The dry tannins also serve as a cleansing agent on the palate by binding to the grease and oils left over in the mouth. Spicy and sweet foods can accentuate the dry, bitterness of tannins and make the wine seem to have off flavors.

Alcohol

Alcohol is the primary factor in dictating a wine's weight and body. Typically the higher the alcohol level, the more weight the wine has. An increase in alcohol content will increase the perception of density and texture. In food and wine pairing, salt and spicy heat will accentuate the alcohol and the perception of "heat" or hotness in the mouth. Conversely, the alcohol can also magnify the heat of spicy food making a highly alcoholic wine paired with a very spicy dish one that will generate a lot of heat for the taster

5.6 Question

1. Write about the Principal of wine regions?
2. Write a short note on wine laws?
3. Write about the grape varieties of wine?
4. Write a short note on production and brand names of wine?
5. Write a short note on Food and wine Harmony

5.7 Reference

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UNIT 6

Beer

Structure

6.0 Objective

The objective of unit is to provide learner with complete understanding of the beer beverage, learner will be able to understand the origin of the beer, manufacturing process and impact of ingredients on the beer.

The leaner will also be able to understand the various types of beers and care needed in beer storage and service.

6.1 Introduction & History

Beer is derived from an Anglo-Saxon word called ***'Baere'***, which means barley. Sumerians, who lived in fertile land between the Tigris and Euphrates, made the first detailed mention of beer more than 5,000 years ago, in the area now known as Iraq. They invented writing, and among their surviving records on clay tablets more than 20 varieties of beer are mentioned and detailed recipes that include beer as an ingredient are documented. Reliefs on Egyptian tombs dating from 2400 BC show that barley or partly germinated barley was crushed mixed with water and

dried into cakes. When broken and mixed with water, the cakes gave an extract that was fermented for several days. The ancient brewers used dates and honey to flavour the thick but nourishing drink that resulted.

Beer brewing traveled to Europe, following the cultivation of grain. In cooler climates grape for wine production was difficult to grow, but wheat and barley flourished. This variation in climate created something of a North- South divide in alcohol consumption.

The monks across Europe helped to nurture the art of brewing during this period and their malt was especially valued. Large-scale breweries could be found in the monastic settlement that sprang up across Europe from the 5th Century onwards. Hops were used in Germany in 11th century, and in 15th century they were introduced to Britain via Holland.

The monks of Bavaria were responsible for an innovation that was to change the face of beer brewing- bottom fermentation. Before this time the yeast rose to the top of the fermenting product and was allowed to overflow or was manually skimmed. However, during the summer months, fermentation was likely to spoil the drink due to bacterial action. The Bavarian monasteries attempted to store beer for long periods in cool cellars. This storage method caused some yeast to change their character. In lower temperatures instead of frothing to the top of the fermentation vessel, the yeast sank to the bottom and fermented much more slowly. This bottom-fermented beer could be stored for much longer periods –a process known as ***largering***, derived from a German word for storage.

Yet a greater cause for celebration, and one for which today's beer drinkers have a reason to be thankful, was provided by the elector of Bavaria in 1516. Beset with debts arising from military campaigns, the elector sought to develop the brewing industry as a source of taxable revenue. To further the reputation of the Bavarian brew, he issued a purity order, the ***Reinheitsgebot***. This order established that the ingredients and agents of Bavarian beer be only malted barley, hops and water.

Inspite of the breakthrough in invention of bottom fermented beer, brewers still worked hard to control the beer's strength and temperature during brewing.

In 1836 Gabriel Sedlmayr took over running of the Spaten brewery in Munich and developed the art of producing more stable, bottom-fermented beers through cold storage.

Despite their novel brewing method, however, these new larger beers remained a fairly conventional dark brown or amber coloured. After yet another disastrous brew in 1838, the inhabitants of Bohemian town Plzen decided to build another brewery. They then employed

Bavarian brewer named Joseph Groll to brew their beer using more reliable method of bottom-fermentation.

On October 5, 1842 Josef Groll mashed his batch of beer in Plzen and the world's first ever-golden lager was born. Soon what came to be known as the Pilsner style was copied all across the world. Soon, Pilsner style began to gain popularity all over the European world. Countries that had no brewing tradition of their own have since adopted this universally popular golden brew and pilsner-inspired largers have become the most widely brewed international beer.

The 19th century was the "Century of Refrigeration" bringing about the chilling breakthrough, which took care of the most difficult issue that the brewers were dealing with.

6.2 Ingredients

Malted barley

The basic ingredients of beer are water; a starch source, such as malted barley, able to be fermented (converted into alcohol); a brewer's yeast to produce the fermentation; and a flavouring, such as hops, to offset the sweetness of the malt.A mixture of starch sources may be used, with a secondary starch source, such as maize (corn), rice, or sugar, often being termed an adjunct, especially when used as a lower-cost substitute for malted barley. Less widely used starch sources include millet, sorghum, and cassava root in Africa, potato in Brazil, and agave in Mexico, among others. The amount of each starch source in a beer recipe is collectively called the grain bill.

Water

Beer is composed mostly of water. Regions have water with different mineral components; as a result, different regions were originally better suited to making certain types of beer, thus giving them a regional character. For example, Dublin has hard water well suited to making stout, such as Guinness; while Pilsen has soft water well suited to making pale lager, such as Pilsner Urquell. The waters ofBurton in England contain gypsum, which benefits making pale ale to such a degree that brewers of pale ales will add gypsum to the local water in a process known as Burtonisation.

Starch source

The starch source in a beer provides the fermentable material and is a key determinant of the strength and flavour of the beer. The most common starch source used in beer is malted grain. Grain is malted by soaking it in water, allowing it to begin germination, and then drying the partially germinated grain in a kiln. Malting grain produces enzymes that will allow conversion from starches in the grain into fermentable sugars during the mash process. Different roasting

times and temperatures are used to produce different colours of malt from the same grain. Darker malts will produce darker beers.

Nearly all beer includes barley malt as the majority of the starch. This is because of its fibrous husk, which is important not only in the spargin stage of brewing (in which water is washed over the mashed barley grains to form the wort) but also as a rich source of amylase, a digestive enzyme that facilitates conversion of starch into sugars. Other malted and unmalted grains (including wheat, rice, oats, and rye, and, less frequently, maize (corn) and sorghum) may be used. In recent years, a few brewers have produced gluten-free beer made with sorghum with no barley malt for people that cannot digest gluten-containing grains like wheat, barley, and rye.

Hops

Hops are the female flower clusters or seed cones of the hop vine *Humulus lupulus*, which are used as a flavouring and preservative agent in nearly all beer made today. Hops had been used for medicinal and food flavouring purposes since Roman times; by the 7th century in Carolingian monasteries in what is now Germany, beer was being made with hops, though it isn't until the thirteenth century that widespread cultivation of hops for use in beer is recorded. Before the thirteenth century, beer was flavoured with plants such asyarrow, wild rosemary, and bog myrtle, and other ingredients such as juniper berries, aniseed and ginger, which would be combined into a mixture known as gruit and used as hops are now used; between the thirteenth and the sixteenth century, during which hops took over as the dominant flavouring, beer flavoured with gruit was known as ale, while beer flavoured with hops was known as beer. Some beers today, such as *Fraoch* by the Scottish Heather Ales company and *Cervoise Lancelot* by the French Brasserie-Lancelot company, use plants other than hops for flavouring.

Hops contain several characteristics that brewers desire in beer: they contribute a bitterness that balances the sweetness of the malt; they provide floral, citrus, and herbal aromas and flavours; they have an antibiotic effect that favours the activity of brewer's yeast over less desirable micro-organisms; and they aid in "head retention", the length of time that a foamy head will last. The preservative in hops comes from the lupulin glands which contain soft resins with alpha and beta acids. Though much studied, the preservative nature of the soft resins is not yet fully understood, though it has been observed that unless stored at a cool temperature, the preservative nature will decrease. Brewing is the sole major commercial use of hops.

Yeast

Yeast is the microorganism that is responsible for fermentation in beer. Yeast metabolises the sugars extracted from grains, which produces alcohol and carbon dioxide, and thereby turns wort into beer. In addition to fermenting the beer, yeast influences the character and flavour. The dominant types of yeast used to make beer are*Saccharomyces cerevisiae*, known as ale yeast, and *Saccharomyces uvarum*, known as lager yeast; *Brettanomyces* ferments lambics, and *Torulaspora delbrueckii* ferments Bavarian weissbier. Before the role of yeast in fermentation was understood, fermentation involved wild or airborne yeasts, and a few styles

such as lambics still use this method today. Emil Christian Hansen, a Danish biochemist employed by the Carlsberg Laboratory, developed pure yeast cultures which were introduced into the Carlsberg brewery in 1883, and pure yeast strains are now the main fermenting source used worldwide.

Clarifying agent

Some brewers add one or more clarifying agents to beer, which typically precipitate (collect as a solid) out of the beer along with protein solids and are found only in trace amounts in the finished product. This process makes the beer appear bright and clean, rather than the cloudy appearance of ethnic and older styles of beer such as wheat beers.

Examples of clarifying agents include isinglass, obtained from swimbladders of fish; Irish moss, a seaweed; kappa carrageenan, from the seaweed *Kappaphycus cottonii*; Polyclar(artificial); and gelatin.

6.3 Manufacture of beer

The main ingredients for manufacturing beer are water and barley. Hops and yeast are agents, which provide flavour and fermentation to beer. Water was at one time of great importance to production of beer, since different waters produced different beers. Today breweries can balance their waters by adding various salts. Barley is the "soul" of good beer.

The basic recipe and method of brewing beer is straightforward: Barley is turned into malt; the malt is "cooked" in hot water; hops are added as an agent of flavouring and preservation; yeast is introduced to bring about fermentation.

- Before malting, barley is stone hard; afterwards, though its appearance is much the same, however, it acquires a biscuit like flavour and consistency. The purpose of this metamorphosis is to render soluble the starches, which are contained in the grain.

- Steeping of the barley in the water induces a controlled germination. The grain is then spread on the floor during this period, which may last for a week. The traditional malster walked barefoot so as not to damage the grains, which then might become mouldy.

- Drying arrests the germination. Normally, the temperature applied is 80-110 º C. Roasted malt is called ***Vienna Malt.***

- Malt is milled into grist before brewing process begins. If other adjuncts are added then they are rendered soluble by precooking.

- The first stage of brewing process is feeding of the gristed malt into ***Mash Tun***. It converts starch into fermentable sugars.

- Mashing takes place by infusion or decoction. Incase of decoction method the mash is put into ***Lauter Tun.*** Here the mash is separated and the clarified mash is called ***Wort.***

- The wort is sent to brewing kettle or "coppers", where it is heated to boiling point. At this stage hops are added in palette form or whole or oil. After brewing spent hops are removed. The hopped wort is then cooled before being passed on to fermentation vessel, where the yeast is added.

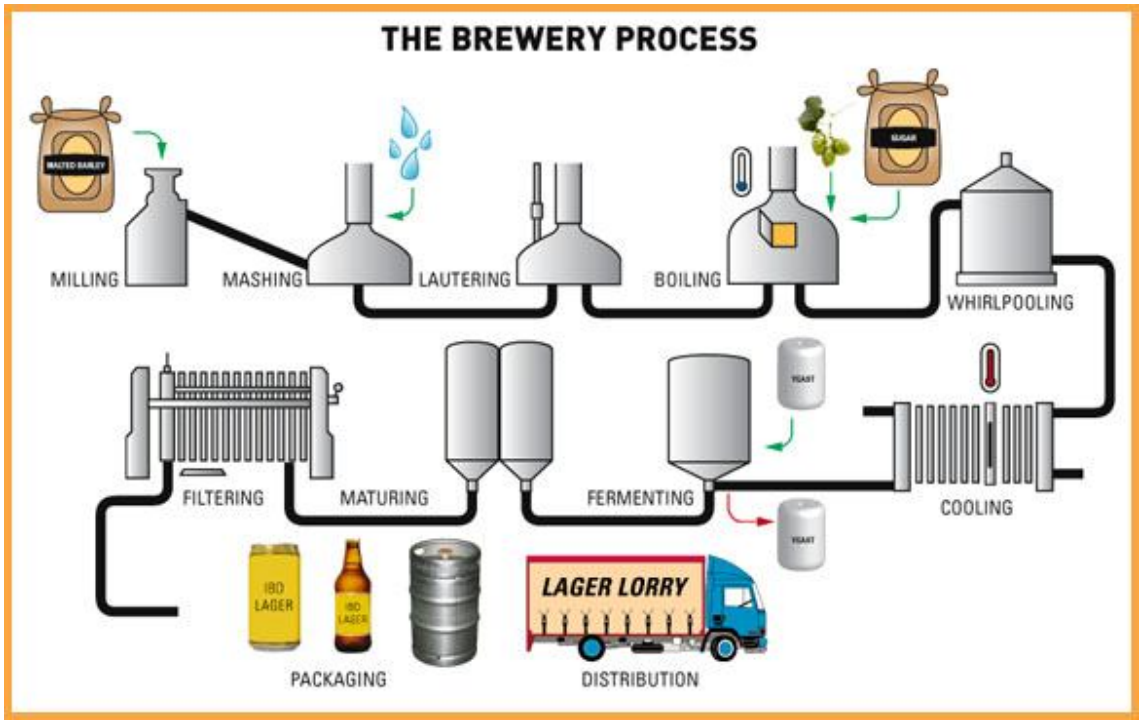
- Yeast is added depending on type of fermentation: i.e. ***Saccharomyces carlsbergensis*** for Bottom fermented beer and ***Saccharomyces cerevisiae*** for Top fermented beer

- For top fermented beer primary fermentation takes place at 15-20º C, bottom fermented beer takes place at 7-12-7º C. At this stage beer is referred to as ***'Green Beer'***

- Primary fermentation is followed by secondary fermentation, this is sometimes referred to as maturing, aging, ripening, and conditioning and incase of bottom-fermented beer "largering". Secondary fermentation is done by Krausening incase of bottom fermented beer and priming incase of top fermented beer.

- After conditioning, mature beer is clarified and then filtered .

- This process is followed by pasteurization by tunnel and flash method.



Conditioning

After an initial or primary fermentation, beer is conditioned, matured or aged, in one of several ways, which can take from 2 to 4 weeks, several months, or several years, depending on the brewer's intention for the beer. The beer is usually transferred into a second container, so that it is no longer exposed to the dead yeast and other debris (also known as "trub") that have settled to the bottom of the primary fermenter. This prevents the formation of unwanted flavours and harmful compounds such as acetylaldehydes.

Kräusening

Kräusening is a conditioning method in which fermenting wort is added to the finished beer. The active yeast will restart fermentation in the finished beer, and so introduce fresh carbon dioxide; the conditioning tank will be then sealed so that the carbon dioxide is dissolved into the beer producing a lively "condition" or level of carbonation. The kräusening method may also be used to condition bottled beer.

Lagering

Lagers are stored at near freezing temperatures for 1–6 months while still on the yeast. The process of storing, or conditioning, or maturing, or aging a beer at a low temperate for a long period is called "lagering", and while it is associated with lagers, the process may also be done with ales, with the same results – that of cleaning up various chemicals, acids and compounds.

Secondary fermentation

During secondary fermentation, most of the remaining yeast will settle to the bottom of the second fermenter, yielding a less hazy product.

Bottle fermentation

Some beers undergo a fermentation in the bottle, giving natural carbonation. This may be a second or third fermentation. They are bottled with a viable yeast population in suspension. If there is no residual fermentable sugar left, sugar and/or wort may be added in a process known as priming. The resulting fermentation generates CO_2 that is trapped in the bottle, remaining in solution and providing natural carbonation. Bottle-conditioned beers may be either filled unfiltered direct from the fermentation or conditioning tank, or filtered and then reseeded with yeast.

Cask conditioning

Cask ale or cask-conditioned beer is unfiltered and unpasteurised beer that is conditioned (including secondary fermentation) and served from a cask, either pumped up from a cellar via a beer engine (hand pump), or from a tap by gravity. Sometimes a cask breather is used to keep the beer fresh by allowing carbon dioxide to replace oxygen as the beer is drawn off the cask. The term "real ale" as used by the Campaign for Real Ale (CAMRA) refers to beer "served without the use of extraneous carbon dioxide", which would disallow the use of a cask breather.

6.5 Types of beer

There are three traditional styles of beer:

1. Top Fermented

- **Ales–** Generic term for English styles top fermented beer. Copper coloured or darker. Served at room temp**.**

- **Porter** – Originally local London beer made with roasted un-malted Barley. Strength 5-7.5% v/v.
- **Trappiste –** Ale type beer produced exclusively in Belgium and The Netherlands. Strength 6-8 % v/v
- **Kolsch**– Product of Cologne - Bonn area, usually served with German sausage.
- **Stout** - National beer of Ireland, the famous Guinness brewery of Dublin. Alcoholic strength is 4-7% v/v.

2. Wheat Beer

- **Weizenbier** - Originating from Bavaria, served with a slice of lemon. Alcohol content is 5% v/v.

- **Weisse (Berliner) –** Originating from Berlin. Served with the essence of raspberry juice. Alcohol content is 2.5-3% v/v

3. Bottom fermented beer

- **Muchener** - Internationally accepted name for dark brown beer. In home city it is called Dunkel. Alcohol content is 4-4.75% v/v.
- **Vienna** - Amber coloured beer, In home city it is referred to as Spezial Alcohol content is 5.5% v/v.
- **Pilsner**- Outside Czechoslovakia usually spelled as Pilsener. Golden colour clear bear. Alcoholic content 5% v/v
- **Bock**– A strong bottom fermented beer Often labeled with a goat symbol.Alcohol strength not less than 6% v/v.

- **Dopple Bock-** Extra strong bottom fermented beer. First brewed by the Italian workers in Bavaria. Brand names end in the suffix --ator. Alcoholic content is 7.5-13% v/v

There are four main families of beer styles determined by the variety of yeast used in their brewing.

6.4.1 Ale (top-fermenting yeasts)

Ale yeasts ferment at warmer temperatures between 15°C and 20°C (60°F to 68°F), and occasionally as high as 24°C (75°F). Pure ale yeasts form a foam on the surface of the fermenting beer, because of this they are often referred to as "top-fermenting" yeast - though there are some ale yeast strains that settle at the bottom. Ales are generally ready to drink within three weeks after the beginning of fermentation, however, some styles benefit from additional aging for several months or years. Ales range in color from very pale to black opaque.

6.4..2 Lager (bottom-fermenting yeasts)

While the nature of yeast was not fully understood until Emil Hansen of the Carlsberg brewery in Denmark isolated a single yeast cell in the 1800s, brewers in Bavaria had for centuries been selecting these cold-fermenting Lager yeasts by storing or "Lagern" their beers in cold alpine caves. The process of natural selection meant that the wild yeasts that were most cold tolerant would be the ones that would remain actively fermenting in the beer that was stored in the caves. Some of these Bavarian yeasts were stolen and brought back to the Carlsberg brewery around the time that Hansen did his famous work.

Lager yeast tends to collect at the bottom of the fermenter and is often referred to as "bottom-fermenting" yeast. Lager is fermented at much lower temperatures, around 10°C (50°F), compared to typical ale fermentation temperatures of 18°C (65°F). It is then stored for 30 days or longer close to the freezing point. During the storing or "lagering" process, the beer mellows and flavors become smoother. Sulfur components developed during fermentation dissipate. The popularity of lager was a major factor that led to the rapid introduction of refrigeration in the early 1900s.

Today, lagers represent the vast majority of beers produced, the most famous being a light lager called Pilsner which originated in Pilsen, Czech Republic (Plzen in Czech language). It is a common misconception that all lagers are light in color: lagers can range from very light to deep black, just like ales.

6.4.3 Beers of Spontaneous Fermentation (wild yeasts)

These beers are nowadays primarily only brewed around Brussels, Belgium. They are fermented by means of wild yeast strains that live in a part of the Zenne river which flows through Brussels. These beers are also called Lambic beers.

6.4.4 Draft beer

Draft beer is a recognized form of fresh and flavorful beer on tap from a kegerator system. In most cases , this form of beer is served at bars or restaurants as a flavorful and inexpensive beer

The word draft is comes from the English for the word “draught” which means ‘to pull’ from a cask with a hand pump. Draught beer often refers to beer ‘on tap’ that comes from containers 5 gallon or less. Click here to see other sizes, less than 5 gallons, that keg beer comes in.

The major difference between bottled / caned beer and keg beer is the pasteurization process in the brewery. Keg beer is almost never pasteurized and that means the keg must be refrigerated. And ultimately this is the way beer should taste; not from a pasteurized can. It is well documented that pasteurized beer, is packaged at very high temperatures that kill the flavor of the beer.

Keg has become a term of used in the 1950s as pasteurised draught beers were replacing more traditional european style cask beers. The quality of the kegging process at the brewery was not as good as it is today, and sometimes the keg beers are referred to as tasting like 'Plastic Beer'. Some beer drinkers believed that chemicals were used to create a foam head.

Despite this consumer concern, keg beer was replacing traditional cask ale in all parts of the europe, primarily because it requires less care to handle.

Equipment for Draft Beer Service

A draft beer system can be divided into three equipment categories:

- **Cooling** (Refrigeration)
- **Beer Flow**
- **Gas Pressure**

Cooling (Refrigeration): There are many configurations for cooling and storing keg beer. These include refrigerators which also known as Kegerator, Mobile Bar units and walk-in room coolers. A 1ess expensive method of storing beer is to convert a food refrigerator or freezer into a kegerator. All provide the same function by storing the keg under refrigeration at a constant 38°F temperature.

Beerflow Components: The components of a draft beer system include all the equipment from the keg to the faucet. These components include the Keg, the Keg Couplet (Keg Tap) brewery approved Beer and gas Line tubing and associated Fittings, Beer Shank' assembly and the Beer Faucet. In a counter top dispensing application, a Beer Tower is used, The Beer Tower assembly commonly includes a Beer Line & Fitting, Beer Shank assembly and a Faucet.

The first component is the Keg which contains a valve with a stainless beer flow tube. The beer in the keg contains CO_2 which is naturally produced during the fermentation process. The level of CO_2 in the beer is determined by the brewer and type of beer in the keg (lager, ales; stouts, etc.) The level of $C0_2$ varies by type of beer and because of these differences 'the amount of Gas

Pressure applied to the keg will also vary to mi1intaln the proper level of CO_2 in the beer during the dispensing process. The Keg Coupler or the Keg Tap, is the Beer Flow component 1hat opens the valve in the keg and allows gas pressure to enter the keg and for beer to flow out. From the Keg Coupler, beer will flow through hose nipples and brewery approved Beer Line (flexible tubing) to the Beer Shank assembly and out the Beer Faucet. The diameter and length of the beer line plays a major role in controlling the speed of the beer flow at the Beer Faucet. In most Direct Draw refrigerator draft beer systems (Kegerator) 3/16" (inside diameter) beer line is used. The Beer Faucet is the most visible beer flow component of the draft Beer System. The Beer Faucet is used to open the system (pour the beer) and close the system (stop pouring the beer). Beer faucets are also known as Taps or Spigots. The Beer Faucet connects to the Beet Shank assembly by interlocking teeth between the back end of the beer faucet and the Beer Shank and is tightened with a special Faucet Wrench that connects to the Beer Shank coupling nut through a series of holes 1ocated on the coupling nut.

Gas Pressure Components: These components supply pressure to the beer keg from thy gas source. Gas Cylinders include a shut off valve to open and close the gas supply and are manufactured in either aluminum or steel and hold CO_2 or CO_2 / Nitrogen blend for systems and products that require a mixed gas pressure source (stouts, etc).

A CO_2 Regulator regulates the pressure from the Gas Cylinder (high pressure source) to the keg coupler (keg tap) connected to the keg valve in the keg (low pressure) where a brewery recommended pressure is prescribed (generally 12-l4 lbs in Kegerator). A Gas Regulator contains a manual adjusting screw or knob to regulate the amount of pressure supplied to the keg. A properly adjusted and functioning Gas Regulator is critically important to maintaining the proper level of CO_2 in the beer, too much CO_2 Gas Pressure may add CO_2 to the beer and cause foaming problems and too little CO_2 Gas Pressure may cause CO_2 to release from the beer causing a flat beer.

6.5 Leading Brands of Beer

1. Bud light
2. Budweiser
3. Heineken
4. Stella Artois
5. Corona
6. Skol
7. Guinness
8. Aguila
9. Miller Lite
10. Brahma
11. Tsing Tao
12. Tiger
13. Amstel
14. Foster
15. Strohs
16. Kingfisher
17. Kalyani Black label

6.6 Care for Beer

TRANSPORT

Beer kegs must be handled with care during transport, loading and unloading. Kegs need to be unloaded carefully and then cautiously carried to their designated place of storage or cellar. Throwing kegs on the ground may damage them.

STORAGE

Beer must be stored in a dark, clean and well-ventilated space with no radiant heat source, and it must be protected from frost and direct sunlight. The ideal temperature of a storage room is a constant temperature of 7 – 10 °C.

PRESSURIZING BEER

Certain pressure is needed for the beer to flow from a keg to the beer tap. Draught gas (a mixture of carbon dioxide and nitrogen) or pure carbon dioxide in pressurized bottles are most appropriate for pressurizing. Where this is impossible, compressed air from a compressor is used. The air sucked in must be perfectly clean without odour or other impurities. The compressor should be located in a special, well-ventilated room, approximately 1m above ground, and should be kept clean.

BEER TUBING

Beer tubing must be as short as possible. It needs to be kept clean. Beer yeast, proteins and other substances settle on the inside of beer tubes and create mucous film. This layer of sediment may often come off, making the beer cloudy and thus degrading the beer. If the beer tubing is cleaned insufficiently, it has very negative effects on beer aroma and taste. The tubing must be rinsed with clean water after draughting is finished. Thorough cleaning of the beer tubing and the flow cooler must be done at least once a week or when necessary. The beer quality is also affected by the cleanliness and technical condition of a dispensing head. It must be cleaned and seals must be checked prior to tapping a keg, and following the racking. The dispensing head must be stored in a clean place.

TAPPING BEER

A clean dispensing head is fixed to a clean keg seal and the draughting gas, carbon dioxide or air main is opened. Beer flows through insulated tubing and a flow cooler to a beer tap with a compensator. Beer contains at least 0.3% carbon dioxide. The higher the beer temperature, the greater the loss of carbon dioxide from beer.

WASHING GLASSES

Special attention must be paid to draught glass, which must be perfectly clean, degreased and undamaged. All kinds of grease leave marks on the glass, an unappetizing look, and degrade the beverage appearance, quality, height, stability and purity of foam. Draught glasses must be washed using running water or in dishwashers with brushes and rinse function.

DRAUGHTING BEER

Beer must not be draughted in advance. A draughtsman draughts only as many glasses as ordered by a waiter or a consumer. Draught beer must not be poured from one glass to another and foam must not be blown off the beer. Beer is draughted from beer taps with compensators by moving the beer tap forward and letting beer run down the glass wall in order to minimize the carbon dioxide loss as CO2 gives the beverage its refreshing taste and then we move the beer tap backwards to draught foam. Beer must be draughted to reach the mark on a glass and chilled to 7 – 12 °C. The function of beer taps must be checked regularly and they must be cleaned daily.

6.7 Summary

The main ingredients for manufacturing beer are water and barley. Hops and yeast are agents, which provide flavour and fermentation to beer. Water was at one time of great importance to production of beer, since different waters produced different beers. Today breweries can balance their waters by adding various salts. Barley is the “soul” of good beer.

The basic recipe and method of brewing beer is straightforward: Barley is turned into malt; the malt is “cooked” in hot water; hops are added as an agent of flavouring and preservation; yeast is introduced to bring about fermentation.

6.8 Review Questions

Q.1 Write a short note on the history of Beer

Q. 2 List important ingredients used in Beer manufacturing.

Q. 3 What is the impact of Hops on the taste of the beer?

Q. 4 Explain Large Beer and how is it different from Ale?

Q. 5 Write short note on Care of beer.

6.9 Suggested Reading

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4. Professional Bar and Beverage Managers Handbook. Atlantic Publishing Company.
5. The Restaurant. Edi IV. Walker and Lundburg.

UNIT 7

SPIRIT

Structure

7.1 Objective

In this unit the student will come to know about the evolution of the alcoholic beverages. They will also understand the process of fermentation and types of fermentations. The student will also be able to identify various types of spirits and their manufacturing process.

7.2 Introduction and Evolution

People have drunk alcoholic beverages since the beginning of time. No one really knows how fermentation was discovered, but it is thought that berries fermented by being left out in the sun, and people ate them and liked the feeling of euphoria that they produced. We do not know what the first written work was, but an educated guess would be that people wrote down what they ate and drank.

Dionysus, the Greek win God, is a familiar name. Bacchus, the Roman God of wine and symbol of indulgence, is still referred to in the modern world.

The Babylonians and Assyrians are known to have ***fermented honey***, ***commonly referred to as "Mead Making"***. The mead was stored in clay pots, which guaranteed them an annual supply of potable beverage.

Once people start something, others try to improve on it. The Egyptians added the juice of dates to produce liqueur of a higher alcoholic content. Other fruit juices were experimented with, including pomegranates. What they were really producing was a heavy enough to preserve it, but for long-term storage they also used sealed clay pots.

Grapes were cultivated before 6000 B.C., and the fruit that was not eaten was crushed into juice. People did not know about wild yeast spores, nor did they understand what happened to grape juice if it was left open to the air. The sweet liquid would suddenly start to bubble (ferment), and the taste would change, strange things would happen to people when they drank it. Wine was born through ignorance, but perfected with experience and knowledge.

Grains have been produced since the beginning of time, but their utilization for human food took many years to come about. We cannot date the first milling of grain into flour to produce the first bread, but it is safe to say that the fermenting of grain to produce a beverage followed very rapidly. Again the wild yeast spores did their work. People eventually cultivated yeast, but this took many years to develop.

Nothing held back humanity's inventive nature. Where there was a surplus of a food product, they tried to make a drink out of it.

The Palestinians used palms, dates, and pomegranates for non-alcoholic beverages which eventually converted to wines. The cultivation of many types of fruits for food led to overabundance. These surplus fruits were converted to fermented beverages for easy storage and transportation.

Throughout populated areas of the world, people independently started creating alcoholic beverages. The ***South American Indians converted "cassava" through fermentation to "Paiwari" and the Aztecs made pulque for grain.*** The Indians of Central America converted cactus, and the North American Indians used wild fruits and berries.

During the Middle Ages, the production of wine became an honorable profession, and the title of "vintner" became part of our language. Germany and central Europe had over forty known vineyards, some of which are still productive today. Also, during this period, people started ***producing alcoholic beverages for trade and profit rather than for their own consumption.*** The forerunners of our present-day sherry from Spain and port from Portugal were formulated during the fourteenth century.
During the renaissance, the Church became the prime producer of alcoholic beverages in the forms of beer and ale, wines and cordials. The process of distillation is credited to the hardworking monks, who found that they could make a higher proof alcohol for medicinal purposes. If did not take along to find that drinking cordials could also be pleasurable. The Benedictine Monastery of St. Gall was known for its fine cordials. Some of their recipes are still used today. Much of the flavour of the original fruits was lost through the distillation process.

The necessity of flavouring the raw alcohol led to further experiments, the results being the processes of infusion and percolation.

The sixteenth century was an age of distilled spirits both in home production and for trade. Names that are recognized today came into being. Many countries would like to claim they were the first to produce to distilled spirit ***(Just to mention a few: aquavit from Sweden, Geneva or gin from Holland, brandy from France, whisky from Scotland, or whiskey from Ireland, all basically grain products).***

Serving spirits first became an accepted practice in the home and was a sign of hospitality. Early travellers were accommodated at church properties, and eventually inns became places for refresh one's self not only with food and wine, but also with a bed after a long journey. With the advent of the merchant class, wine shops and ale houses were a long journey. With the advent of the merchant class, wine shops and ale houses were started. They provided owners with a livelihood and the public with places to meet and enjoy leisure hours. Modern bars and cocktail lounges started late in the nineteenth century and became and accepted part of society in the early part of the twentieth century.

7. 3 Distillation

DISTILLTION IN ITS SIMPLST SENSE works on a very basic principle : liquid is boiled and when it vaporizes the more volatile elements come off first and can be collected and reconverted to liquid in a more concentrated pure form.
Archaeological evidence the Mesopotamia's used very primitive distilling apparatus as early as 3500 BC to make perfumes and essences.

In the fourth century BC the Greek philosopher Aristotle wrote that sea water, after heating and vaporization, could be collected as sweet water. Distillation is taken from Latin very ***destillare*** meaning 'to drip'.

Generally the Arabs are given credit for introducing distilling to Europe through their centre of learning in Spain and elsewhere. They gave a much greater degree to sophistication to the art they inherited from the Alexandrians and Egyptians.

From the Arabs, came the word alcohol, to describe the end product of the alembic. The term is a corruption of ***al khol***, the Arabic name for a black powder obtained by distillation and widely used as cosmetic eye shadow throughout the Arab world.

From roughly 1100 to 1300 in northern Italy, France, Germany Ireland and Spain, monks, doctors, philosophers and alchemists were rediscovering distillation. Some were interested in alcohol as a medicine or for extracting and infusing herbs and essences; others believed it was the secret of transmuting base metals into gold and silver. But they all believed distilled spirit

was a new element, and called it the water of life' – ***eau de vie*** in French, ***usquebaugh*** in Gaelic, ***aqua vitae*** in Italian.

In Ireland the production of spirits from grain in also thought to have started about this time.

An existing document shows that Armagnac was being made for local consumption as early as 1411, and northern Italy and Alsace already had a reputation for the production of spirits.

Until the nineteenth century all spirits were produced in more or less sophisticated versions of the pot, or alembic, still. At its most basic this was little more than a copper kettle for heating the base wine or cereal mash, with a heavier, more expensive, lower volume malts.

This process was quickly by other spirits producers and today gin, vodka, akvavit. White rum, some dark rums, many Canadian and American whiskies, many brandies including Armagnac, and schnapps, are wholly or partly made from patent still spirits.

The pot or alembic still survives as the vehicle for the production of cognac, malt whisky, most Irish whiskies and the flavours used in liqueurs.

7.4 WHISKY

SINGLE MALT WHISKY

Scotch whisky is produced in 3 forms

- Malt whisky
- Grain whisky
- Blended(malt and grain)

Malt whisky- is the original of the three infact until 1830 malt whisky was the only whisky.

The term *single malt* has a very precise meaning it indicates that all whisky in the bottle was made in the same distillery.

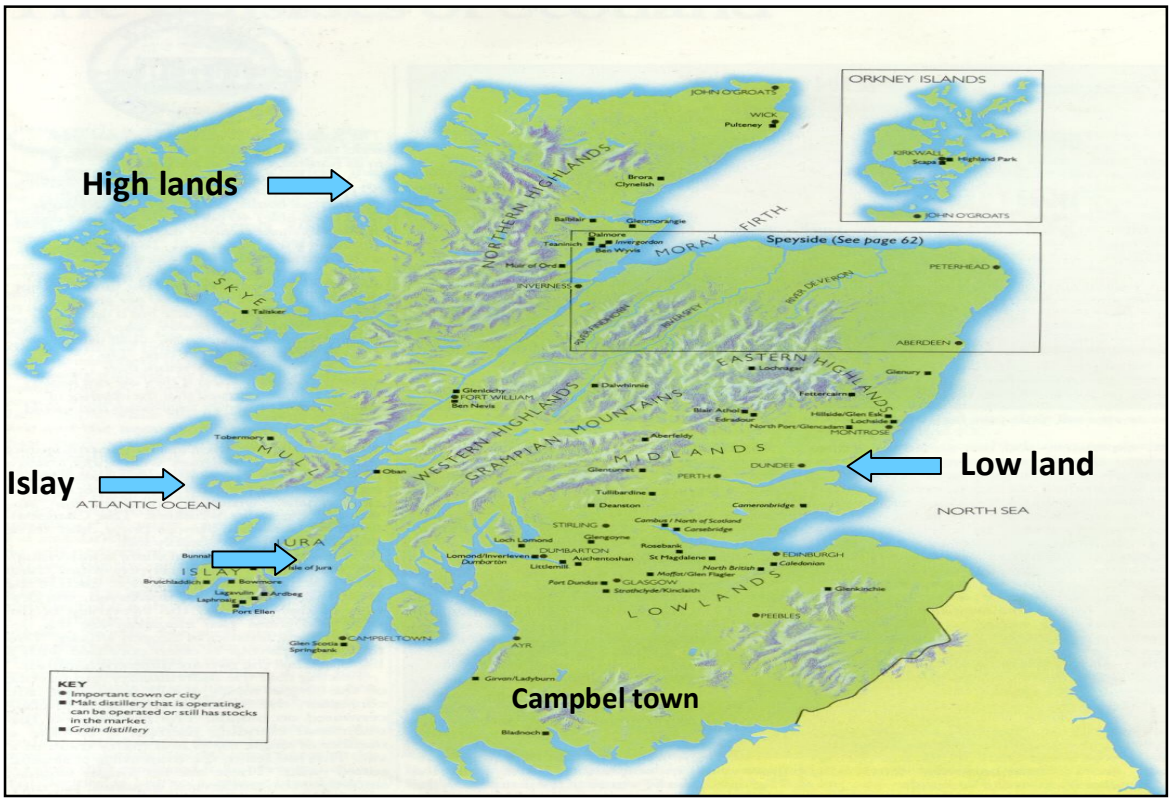
- It is the product of a single distillery
- Its not been blended with whisky from any other distillery
- Is made exclusively from malted barley not other grain, sugar or fermentable material.

It is different from others because:

- These are distillated by pot still method
- It is unique result of the effect of malted barley, Scottish water, peat distilling and oak wood maturation in damp air.

- ❖ Different malt whiskies reach maturity over a different span of time ranging from 5 – 15 years.
- ❖ On maturation the malt whisky softens, looses its pungent character and takes out its colour- anything from a pale straw to a honey gold.
- ❖ Each single malt its own distinctive character and its difficult to make generalization about different areas but the blenders have adapted a geographical system classifying malts, separating them into low land, Islay, Campbel town and high land malts.

- **REGIONS OF SCOTLAND**



ISLAY

- This greatest of whisky islands, much of it deep and peat lashed by wind, rain, sea.
- 25 miles long and has 8 distilleries.
- Single malts noted for its sea weedy, iodine like and phinolic character.
- Best from the region are

➢ Laph Roaig

- Lagavulin
- Bruich Ladich
- Bow more

LOW LANDS

- Mostly used as filler malts to gives weight to blend as they lack the distinctive malt character.
- It is defined by a line following old country boundaries and running from the lyde estuary to the river Tay.
- Some known whiskies are:
  - Rosebank
  - Littlemill
  - Bladnoch

HIGH LANDS

- Biggest of all regions, there are several rivers most noticeable one being livet.
- The name glen livet is most associated with high land malt.
- 23 distilleries use the title glenlivet in this name.
- But the whiskies are known by their main distillery's name.
- Some best known being:
  - Glenfiddch
  - Macallan
  - Glenlivet
  - Glen morangie

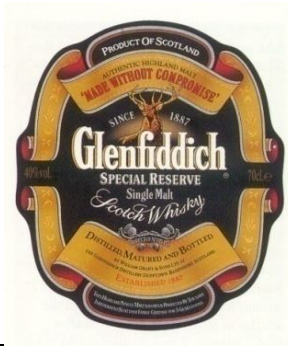
CAMPBELL TOWN

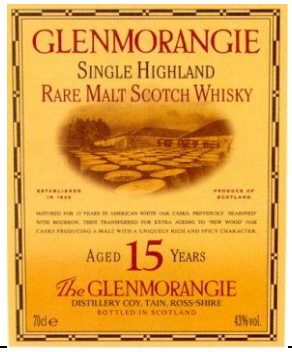
- Situated on kintyre peninsula of Islay
- Once had 30 distilleries but has only two
  - Spring bank
  - Glen Scotia

SERVICE

- Malt whisky is enjoyed neat or with a splash of cold water to liberate the bouquet.

- They are also interestingly and agreeable in a snifter as an after dinner digestive as an alternative to cognac.
- They do not go well with mixed drinks





7.4 RUM

Today rum has become the new trendy spirit, the latest drink for socialites, though to rum aficionados this must be amusing. Rum has been part of history for more than three hundred years. It is probably the least understood of the five main spirits, despite the fact that, in its white version, it is one of the biggest- selling of them all. Indeed, it is debatable whether many of those knocking back Bacardi & Cokes in bars around the world realize they are drinking some form of rum at all.

The invention of rum probably dates from not long after the foundation of the sugar plantations in the West Indies, in the early 16th century. Christopher Columbus got the cane cuttings to the New World (Caribbean) in 1493, which eventually gave rise to a drink that was to dominate the West Indian economy. Before long , rum won favor with the pirates and privateers who prowled the Caribbean during the 17th century. This gave rise to its wild , yo-ho-ho image, which was later compounded when rum became the official spirit of the British Navy, with a daily ration issued to all hands. As a result is difficult to say where rum got its name- one school hold that the name 'rum' came from '*rumbullion*' or '*rumbustion*' - old English words meaning rumpus or fracas, presumably the result of over indulging in the beverage. However the other school on a more sober note suggest that the source is the last syllable of the Latin '*saccharum*', which means sugar or sweet.

7.4 .1 Rum Manufacturing

1. Sugar Cane

Rum distinguishes itself from other spirits by the plant from which it is made. Sugar Cane , *sacchurum officinarum*, a member of the grass family has its origins in Papua New Guinea but this plant is grown in tropical climes around the world. The sweet juice of the mature plant is

extracted by pressing the hard stalk in mechanical mills. Some distilleries use this fresh juice while others use the by product of the sugar refining process know as molasses as the raw material for the fermentation process.

2. Fermentation
The addition of yeast to the sugar cane juice or molasses converts the available sucrose to alcohol in process called fermentation. Typically this takes about a day but some distilleries use yeast that takes much as ten days. To make other spirits, the starches found in grain must be cooked and then enzymes are used to convert the glucose to sucrose which can be fermented. The resulting fermented wine contains only about 10% alcohol by volume.

3. Distillation
To concentrate the alcohol in the sugar cane wine, the wine is boiled while vapor is collected and condensed . The earliest pot stills resembled a tea kettle with a long spout and were capable of distilling on a few liters of alcohol at a time . Modern continuos stills are vertical columns about 10 meters high that are capable of distilling 20,000 liters per day. Since molasses contains higher amounts as sulphur than does sugar cane juice, spirits distilled from fermented molasses are generally distilled to a high distillation purity to reduce the congeners that have been concentrated in the molasses.

3. Aging
Immediately after distillation, the fresh or raw spirits contain small amounts of hydrogen sulfide gas formed during distillation which gives the spirit a hot harsh taste. Although some connoisseurs prefer fresh rum, most consumers prefer the more elegant taste of an aged spirit. Today, almost all rum is aged in used oak barrels that once held Whiskey or Bourbon. Aging can last from one to thirty years or more , making rum one of the most varied of the distilled spirits. During the aging process the rum acquires a golden color that changes to a dark brown with time.

4. Blending and Bottling
Although some rum is bottled directly from the still, most rum is aged and then blended before it is bottled for consumption. Once the spirit is bottled the benefits of age are arrested and little change occurs.

ALCOHOL CONTENT
The bottled strength of rum depends greatly on consumer preferences. While some rum is bottled at about 40% alcohol by volume, other rum are bottled at the strength at which is was distilled or aged.

7.4.2 CLASSIFICATION OF RUM

Rum being produced at so many places around the world and not having internationally set production standards , each rum producing country's definition of types and styles varies.
Here's a rough guide:

1. White, Light or Silver Rum
Clear colored, light bodied and dry rums, generally column distilled, used as a fairly neutral base for cocktails and mixed drinks. The majority are unaged but aged versions do exist.

2. Golden, Amber or Oro Rum
These medium bodied, slightly sweet rums, made in either type of still, that have spent some time in oak. Color comes from the wood, though it can be enhanced by the addition of caramel. The flavor is quite strong in mixed drinks and they're also delicious drunk straight or on the rocks.
3. Dark or Black Rum
Usually made in pot stills with medium to long aging in heavily charred barrels. designed for sipping, these are the very traditional hugely aromatic and full bodied rums with flavors that unmistakably proclaim "molasses".

4. Premium Aged or An'ejo Rum, or Rhum Vieux
Amber hued , well matured rums prized by many connoisseurs above a single malt whiskey or top cognac. The motto here is "drink less but better drink". these should be treated as very classy after dinner drinks served in a brandy glass.

5. Single Marks
Very rare rums from single distilleries, often bottled from individual casks, i.e. they are unblended. Because no two casks from the same origin and of the same mature in exactly the same way, these are very exciting bottlings. Definitely for sipping.

6. Over-proof
Largely white rums bottled at 75.5 per cent alcohol by volume. Traditional the favorite of seafarers and estate workers, providing comfort and warmth against the elements. Much sought after in Europe and North American for blending.

7. Flavored and Spiced Rums
These emerging as real winners with younger drinkers - though they've been around for a hundred years or more. Usually served with mixers or fruit juice.

8. Wedderburn and Plummer

Types of heavy, pot still Jamaican rums fermented with the addition of dunder. Very strong and powerful with flavors of burnt coffee and just a touch of oak. Used widely in Jamaican dark rum blends, but also good for punches and hot toddies.

9. Cachaca

Cane spirits in South American is called *aguardiente de cana* or *cachaca* and like rum, is produced from molasses , cane juice or a mixture of the two , usually unaged. A multi-million case seller in its domestic market , its the basis of the *caiprinha*, a cocktail made with mashed wedges of fresh lime, sugar and crushed ice.

RUM PRODUCING COUNTRIES

Puerto Rico - The world's leading rum producer, sets standard for light bodied rums, and every aspect of production is geared to achieving clean, muted spirits. The three popular styles of rum in Puerto Rico is white, gold or amber and anejos. Some well known brands are Bacardi, Captain Morgan, Don Q , Ron Castillo, Ronrico

Jamaica - The production of rum here differs considerably from the Puerto Rican method. The molasses is reinforced with dunder, skimmings from previous distillations and fermented with yeast. This followed by double distillation in Pot stills. These rums are aged for five to eight years and darkened after blending with caramel. They are full bodied and richly aromatic. Some well known brands Appleton Punch, Lemon Hart, Dagger Jamaica, Myers Original Dark Rum

Barbados - They are generally of the middle range - between Puerto Rican and Jamaican; amber colored with a medium body. Cockspur and Mount Gay are the notable producers.

Cuba - Produces prototype for the kind of light rums - white or gold- now made in Puerto Rico. Havana club is a notable producer.

Demerara (Guyana) - Named after the river that irrigates the cane plantations. Demerara rum was the principal product used by the Royal navy for its rum ration. El Dorado is a notable producer.

Haiti - Rum here is distilled from sugar cane juice rather than molasses. Rhum Babancourt is in the middle range with , with a lovely buoyant quality. They have a distinct brandy like style.

India - Relatively young industry (1950's). The majority is produced for the Armed forces who consume in vast quantities in India.

Indonesia - Java makes Batavia Arak from local sugar cane - very dry, light bodied and fragrant.

Martinique - Has a reputation for rich, pungent rums. Made by the pot still method generally. popular brands Rhum St. James, La Mauny and Rhum Clement
South America - some of these countries produce a rather harsh spirit from sugar cane, called cachaca.

BRANDS

Dark rums
Barbancourt
Myers
Captain Morgan
Lambs Navy
Appleton
Mount Gay
Woods
Hansen

White rums
Barilla
Bacardi
Ron Rico
Rhum St. James
Dry Cane

RUM COCKTAILS

1. Cuba Libre
An ounce and a half of light rum with a table spoon of fresh squeezed lime juice poured over ice and topped with cola.

2. Planters Punch
Two ounces of light rum and fresh orange juice each with a spoon of fresh lemon juice and some ice.

3. Pina Colada
Two measure each of white rum and pineapple juice with a couple of teaspoons of coconut milk and ice.

7.5 TEQUILA

Once dismissed as an insignificant spirit compared to the aristocratic clique that includes Cognac and malt whisky, tequila is now able to enthrall connoisseurs as readily as it entices newcomers. Tequila also benefits from a flamboyant, fun loving image no other spirit can command. Tequila is so much more than the 'killer drink' of popular party mythology. Distilled from the heart of the blue-leafed agave – a large, succulent plant that takes nearly a decade to mature in the heat of central Mexico – tequila is a true classic spirit and as integral to Mexican culture as whisky is to Scottish traditions.

7.5.1 HISTORY

According to an Aztec legend, during Mexico's pre-Hispanic times, tequila was discovered when a bolt of lightening struck an agave field. The bolt tore into the heart of one of the plants and the heat of the lightening bolt was so hot that it burned the heart of the plant for several seconds, causing the plant to become not only cooked but also naturally fermented. The shocked natives noticed aromatic nectar coming out of the plant. The belief that it was a gift from the gods was reinforced by an unexpectedly sweet flavor. They then named this new mysterious drink as *vino mezcal*, the mezcal wine.
Tequila is a distilled spirit that is made only from a plant whose technical name is *Agave Tequilana Weber, blue variety*. Agave is locally known as maguey (mah~gey), and the blue variety is often referred to as *agave azul*, which Mexicans call *"the plant of gods"*.

Contrary to belief, it is not from the cactus family but used to be classified in the same family as Lilys and Aloes.

7.5.2 MANUFACTURING

1. Harvesting

The tequila production begins with the jima, or harvest, and the jimador, who is the harvester of the agave plant. An important difference between the production of tequila and other spirits is that once the agave plant is used, it cannot be reused and it takes approximately 10-12 years for the maturing of a single plant.

After about 8 years, the plant starts to die and it is then closely monitored by the jimador, waiting for the precise moment to harvest the plant. At the time of harvesting, the plant will have a greenish-yellowish color close to the heart of the plant. The leaves are sheared off and the heart is exposed. Each heart weighs about 35 to 60 Kgs. These are then taken to the various distilleries, where the actual production starts.

2. Cooking and milling

The agave is put into brick or concrete ovens. The doors are closed and steam is injected into the ovens. The temperature reaches to about 140 degrees Fahrenheit and the process takes around 24 to 36 hours for completion. The juices that are released from the plants are known as agua miel or honey water. They are collected and transported to a holding vessel for later use. In the modern methods, autoclaves or stainless steel tanks acting as pressure cookers are also used. The starch is converted into sugar and these are helpful in the production of alcohol.

In the next step, the leftover agave is milled using large grinding stones and the resultant concentrate is then put into separate vessels for transportation.

3. Formulation and fermentation

For the production of 100 percent tequila, the juices go straight into fermentation tanks, but for non-100 percent percent tequila i.e. blended or, additional sugars are added. Natural yeasts are used for the production, though sometimes catalysts are used alongside for increasing the speed of fermentation. The regular process takes about a week for fermentation to complete while the catalyst-assisted fermentation takes 36 to 72 hours for completion.

The fermented juice has 5 percent alcohol.

4. Distillation

In the final stage of the production process, the *mosto* or fermented juice is distilled twice. The juice is then transported to a pot still where the liquid is heated to the vaporization stage and two distillation are done so as to produce a potent drink.

5. Aging

At the completion of the distillation process, the product that comes from the still is tequila in its purest form which is actually a *blanco*, or white tequila, sometimes also referred to as *plata*, or silver tequila. Tequilas that become *reposados* or *anejos* are aged in wood vessels of varying sizes. The wood imparts a color, a range of flavors, and fosters development of a different texture or smoothness and body. Reposados are typically aged in large wooden tanks, often redwood or oak, while anejos are almost always aged in Kentucky bourbon barrels. The newer barrels create a stronger product with from the effects of the fresh tannins in the wood, yielding a product with more color. As Oak loses some of its effectiveness over time, the use of older barrels creates a smoother product with less body and color.

Blanco and white tequila is not usually matured, though sometimes their maturation takes place in oak casks with a wax lining, which prevents any color from coming in.

Depending on the type of tequila being produced, aging takes place for between 2 months to four years after which it starts deteriorating.

7.5.3 TYPES AND CLASSIFICATION

The Mexican government has outlined four strict classifications categorizing the various tequilas according to their aging and to a lesser extent their content.

The basic classification is between 100 percent and mixto tequilas. Mixto tequilas have to have a minimum of 51 percent of fermented juices from the agave plant while the 100 percent tequilas are completely made from the blue agave juices. To spare the industry as well as the consumers from difficulties, 100 percent tequilas are referred to as “100 percent Tequila” while the others are called “Tequila”.

Another requirement for the spirits to be called tequila is that they have to be bottled in Mexico. This has been laid down by *Direccion General de Normas*, which is the federal office controlling tequila production.

1. Blanco Tequila

Blanco tequila is tequila in its purest form. Legally it is any tequila that has not been aged for at least sixty days. They are usually stored in stainless steel tanks for a short period before bottling, though in some exceptions they are stored in white oak casks.

2. Respado Tequila

Respado translated literally means "rested". By law they must be aged for a minimum of sixty days, though they are almost always aged for at least one year. The color of a respado ranges from light straw to golden. The main difference between a respado and an anejo is that aging in a respado is done so as to make the product softer and to oxidize the alcohol. This is different from anejo, where the main impact on the tequila from its aging is the transfer of the wood's characteristics to the tequila. Thus the resting period is shorter for a respado.

3. Anejo Tequila

Anejo translated literally means "aged". According to law, an anejo must be aged for a minimum of one year and the aging should take place in government sealed barrels that are no more than 600 liters in capacity. Muy Anejo infers to a product that is "very aged".

4. Joven Abocado (Gold) Tequila

This is the "gold" category of tequilas, which are almost always produced as mixed tequilas. Today, more than half of all tequila exported is joven abocado or gold tequila. It is an unaged blanco to which additives or colors are added after the distillation process.

5. Mezcal

Tequila is actually a type of mezcal, which is a generic term for the agave spirit. The name mezcal is derived from the Nahtual Indian word, meaning "roast agave". It has a more powerful and smokier nose than tequila, and is more pungently earthy, spicy and herbaceous on the palate. Mezcal is primarily produced in the region of Oaxaca in the south of Mexico. Traditionally Mezcal was single distilled, though double distillation in pot stills is now the norm. Despite mezcal's numerous merits, it has always been most notable for containing a worm called gusano in each bottle. It is drunk along with the spirit and is believed to be a part of a macho ritual. Another possible explanation for the addition of the worm is to show the "proof" content of the alcohol in the drink. The worm is also considered to be an aphrodisiac – which may stem from its suggestive shape.

6. Sotol, The Spirit of Chihuahua

This traditional specialty of Chihuahua is rarely seen in any other part of Mexico. The drink is made from a variety of agave called the Sotol plant. The process of making of sotol is quite similar to that of tequila and so is the flavor of the end product.

7. Pulque

Having been around for more than 2000 years, pulque has continued as a Mexican specialty. It has an alcoholic content of 5-6 percent.

AREAS OF PRODUCTION

The regions that have been demarcated by the Mexican government for tequila production are

1. Jalisco
2. Nayarit
3. Michoacan
4. Guanujuato
5. Tamaulipas

Out of these, Jalisco and Tamaulipas are the only two states currently producing tequila.

TEQUILA COCKTAILS

Margarita

White Tequila	2 oz.
Triple Sec	1 oz.
Lime Juice	1 oz.
Coarse salt	
Lime wedge	

Blue Shark

White Tequila	½ oz.
Vodka	½ oz.
Blue Curacao	½ oz.

Combine all ingredients in a cocktail shaker with cracked ice, shake, strain and serve.

Tequila Mockingbird

White Tequila	2 oz.
White Crème de menthe	1 oz.

Lime juice 1 oz.

Combine all ingredients with cracked ice, shake, strain and serve.

DRINKING AND TASTING TEQUILA

The increasing awareness of tequila's distinct categories and virtues of its better quality products has changed the way people are drinking tequila. During the times when choices were not as varied as they are now, the image of slamming shots might have been a fair portrayal of typical tequila consumption. Now tequila has become a premium spirit worthy of both savoring and combining with other fine ingredients for consumption.

Shots - In Mexico, tequila is often served straight , in shot glasses that are taller and more tapered than the regular shot glasses. A second glass containing a sangrita chaser often accompanies the shot. Sangrita is a spicy mix of equal parts of orange juice and tomato juice; Lemon juice or limejuice; salt and a hot chilly pepper sauce. Though this method is good for some occasions, a shot glass will not provide you with the greatest opportunity to enjoy the nuances of tequila

Straight: - Generally, anejos are consumed like other luxury "brown" spirits. Some people prefer them on the rocks as their cocktail of choice in the same way that they might consume a single~malt. Some also believe in drinking the tequila in a brandy snifter.

On the Rocks - Blancos and respados can be consumed either on the rocks or as 'shots' .

The true history of the worm in the bottle

In 1940, Jacobo Lozano Paez started a small bottling facility to produce mezcal. In 1950 he discovered that the maguey (agave) worms gave the mezcal a different flavor. This is how got the idea to give his product a distinctive marketing touch; adding a worm to the beverage and including with the bottle a small sack of salt, seasoned with the same larva, dehydrated and ground.

7.6 ALCOHOL PROOF

Alcohol proof is a measure of how much alcohol (ethanol) is contained in an alcoholic beverage. The term was originally used in the United Kingdom and was defined as 7/4 times the alcohol by volume (ABV). The UK now uses the ABV standard instead of alcohol proof. In the United States, alcoholic proof is defined as twice the percentage of ABV.

The measurement of alcohol content and the statement of this content on the bottle labels of alcoholic beverages is regulated by law in many countries. The purpose of the regulation is to provide pertinent information to the consumer.

From the 18th century until 1 January 1980, the UK measured alcohol content in terms of "proof spirit", which was defined as spirit with a gravity of 12/13 that of water, or 923 kg/m3, and equivalent to 57.15% ABV. The term originated in the 16th century, when payments to British sailors included rations of rum. To ensure that the rum had not been watered down, it was "proved" by dousing gunpowder with it and then testing to see if the gunpowder would ignite. If it did not, then the rum contained too much water and was considered to be "under proof".Gunpowder would not burn in rum that contained less than 57.15% ABV. Therefore, rum that contained this percentage of alcohol was defined to have "100° (one hundred degrees) proof".

The value 57.15% is very close to the fraction 4/7 = 0.5714. Thus, the definition amounts to declaring that 100° proof spirit has an ABV of 4/7. From this, it follows that to convert the ABV (expressed as a percentage, as is standard, rather than as a fraction) to degrees proof, it is only necessary to multiply by 7/4 = 1.75. Thus pure, 100% alcohol will have 100×(7/4) = 175° proof, and a spirit containing 40% ABV will have 40×(7/4) = 70° proof.

The use of "proof" as a measure of alcohol content is now mostly historical. Today, liquor is sold in most locations with labels that state its alcohol content as its percentage of alcohol by volume (ABV).

The term "percent proof" has no meaning: proof should be stated as "degrees proof" (UK) or "proof" (U.S.).

European Union

The European Union follows recommendations of the International Organization of Legal Metrology (OIML). OIML's International Recommendation No. 22 (1973) provides standards for measuring alcohol strength by volume and by mass. A preference for one method over the other is not stated in the document, but if alcohol strength by volume is used, it must be expressed as a percentage (%) of total volume, and the water/alcohol mixture must have a temperature of 20 °C (68 °F) when measurement is done. The document does not address alcohol proof or the labeling of bottles.

United Kingdom

Since 1 January 1980, the United Kingdom has used the ABV standard to measure alcohol content, as prescribed by the European Union.

“In common with other EC countries, on 1st January, 1980, Britain adopted the system of measurement recommended by the International Organisation of Legal Metrology, a body with most major nations among its members. The OIML system measures alcohol strength as a percentage of alcohol by volume at a temperature of 20 °C. It replaced the Sikes system of measuring the proof strength of spirits, which had been used in Britain for over 160 years.”

“Britain, which used to use the Sikes scale to display proof, now uses the European scale set down by the International Organization of Legal Metrology (OIML). This scale, for all intents

and purposes the same as the Gay-Lussac scale previously used by much of mainland Europe, was adopted by all the countries in the European Community in 1980. Using the OIML scale or the Gay-Lussac scale is essentially the same as measuring alcohol by volume except that the figures are expressed in degrees, not percentages."

7.7 Summary

People have drunk alcoholic beverages since the beginning of time. No one really knows how fermentation was discovered, but it is thought that berries fermented by being left out in the sun, and people ate them and liked the feeling of euphoria that they produced. We do not know what the first written work was, but an educated guess would be that people wrote down what they ate and drank. The alcoholic beverages have evolved based on the local traditions and practices and local ingredients have deep impact on the alcoholic beverages. It has become an important part of today's modern life and era.

7.8 Review Questions

1. Write a short note on the evolution of alcoholic beverages.
2. What is the method of distillation ?
3. Explain the method of production of RUM.
4. What are the various types of rum and how are they different?
5. Discuss manufacturing of Tequilla.

7.9 Suggested Reading

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UNIT 8

APERITIFS & LIQUEURS

Structure

8.0 Objectives

- Student know about the types of Aperitifs
- Student know about the Vermouth
- Student know about the Bitters
- Student know about the Types & Brand names
- Student know about the Production of Liqueurs
- Student know about the Broad Categories of Liqueurs (Herb, Citrus, Fruit/Egg, Bean & Kernel)
- Student know about the Popular Liqueurs of the world : history
- Student know about the country of origin,
- Student know about the predominant flavors

8.1 Introduction

The names seem to denote what they are, but confusion abounds when it comes to the two. An aperitif, from the Latin aperire, or "to open," enhances the appetite before a meal. A digestif stimulates digestion once the meal is done.

While there are no hard and fast rules when it comes to **inebriants**, personal taste usually dictating what we drink, aperitifs and digestifs are what they are for some very sound reasons.

Because an aperitif is a stimulant for the appetite and the palate, an excess of alcohol dulls the taste buds and causes other unwelcome results on an empty stomach. Thus, brandy and Scotch whisky do not fit the mold of an aperitif. With few exceptions, the best aperitifs are between 16% and 24% alcohol (32 to 48 proof). They are often wine derivatives that producers fortify and flavor, although some, like the popular Campari, are more akin to spirits than they are to wine.

Appreciation for quality food and drink is more pervasive than ever. Nostalgia for an era in which gentlemen had taste and bartenders were alchemists rather than mere purveyors of cocktails is at an all-time high. As a result, sophistication is front and center. The aperitif and digestif have entered into the realm of cool again. Appreciation for quality food and drink is more pervasive than ever. Nostalgia for an era in which gentlemen had taste and bartenders were alchemists rather than mere purveyors of cocktails is at an all-time high. As a result, sophistication is front and center. The aperitif and digestif have entered into the realm of cool again.

8.2 Facts file and Definition

The apéritif was introduced in 1846, when a French chemist, Joseph Dubonnet, created his eponymous wine-based drink as a means of delivering malaria-fighting quinine. The medicine was a bitter brew, so he developed a formula of herbs and spices to mask quinine's sharp flavor, and it worked so well that the recipe has remained well-guarded ever since. French Foreign Legion soldiers made use of it in mosquito-infested Northern Africa. Joseph's wife was so fond of the drink that she had all her friends try it, and its popularity spread.

Apéritifs were already widespread in the 19th century in Italy, where they were being served in fashionable cafés in Rome, Genoa, Florence, Milan,Turin, and Venice. Apéritifs became very popular in Europe in the late 19th century. The popularity in Europe crossed the Atlantic and by 1900, they were also commonly served in the United States. The apéritif recrossed the Atlantic in the 1970s: the habit of a substantial food offering with the purchase of a drink during "Happy Hour" in the United States pushed the development of a more food-heavy apéritif in Italy as well. In Spain and in some countries of Latin America, apéritifs have been a staple of tapas for centuries.

Definition

An apéritif is a cocktail or other alcoholic beverage that is specifically served before a meal, or

with a small appetizer. In the culinary arts, the purpose of an apéritif is to stimulate or or arouse the appetite.Examples of some common apéritifs include champagne, sherry, vermouth or bitters. Liqueuers made from anise, such as ouzo or anisette, are often served as apéritifs.

8.2Types of Aperitifs

There is no single alcoholic drink that is always served as an apéritif. Fortified wine, liqueur, and dry champagne are probably the most common choices. Because it is served before dining, the emphasis is usually on dry rather than sweet, as a general guideline.

- In France, the apéritif varies from region to region : pastis is popular in the south of France, Calvados brandy in the Normandy region, Crémant d'Alsace in the eastern region. Champagne wine or Cognac may also be served. Kir, also called Blanc-cassis, is a common and very popular apéritif-cocktail made with a measure of crème de cassis (black currant liqueur) topped up with white wine. The word *Kir Royal* is used when white wine is replaced with a *Champagne* wine. A simple glass of red wine, such as Beaujolais nouveau, can also be presented as an apéritif, accompanied by amuse-bouches.

- In Italy, vermouth or wine may be served as the apéritif (called *aperitivo*).

- In Greece, ouzo is a popular choice, except on Crete, where it is very common to take some raki after a meal.

- In the Eastern Mediterranean, arak is served with meze.

Vermouth
A traditional type of fortified wine flavored with botanicals, made by a variety of companies, among whom Martini & Rossi and Noilly Prat are some of the best known. Available in red (aka sweet or Italian) and white (aka dry or French) varieties. (Read more about vermouth here.)

Campari
A quintessential Italian aperitif with distinctively bitter, herbal, slightly spicy, grapefruity taste.

Dubonnet
A wine-based aperitif from France, comes in the popular Rouge and the less common Blanc varieties. Dubonnet Rouge has a rich, spicy port wine flavor, accented by the distinctive bitterness of quinine (the stuff that gives tonic water its zip).

Lillet
Pronounced “lee-LAY,” this classic French wine-based aperitif is available in Blanc and Rouge varieties. Citrusy and spicy, with a delicious honeyed texture, Blanc is the more popular of the two.

Aperol
Made by the same company as Campari, Aperol is a bright orange-hued, spirit-based drink flavored with the distinctive zing of rhubarb. It has recently found a welcome place as an ingredient in the American cocktail repertoire.

Cynar
Cynar (pronounced “CHEE-nar”) is an Italian concoction made with artichokes, which is usually served with club soda and/or orange juice and ice. (Have any readers tried this one? I have yet to, but curiosity and a fierce love of artichokes puts Cynar at the top of my to-drink list this spring.)

8.3Vermouth: Definition,

A traditional type of fortified wine flavored with botanicals, made by a variety of companies, among whom Martini & Rossi and Noilly Prat are some of the best known. Available in red (aka sweet or Italian) and white (aka dry or French) varieties.

8.4 Facts file

Consumption of wines fortified with herbs and/or roots is believed to have begun in China at least as early as the Shang and Western Zhou dynasties in (1250–1000 BC). The extra ingredients were added to wine to make it a medicinal drink. Wormwood wine also played a key role in India around 1500BC.Recipes for infusing white wine date back to ancient Greecefrom around 400 BC. A popular ingredient was wormwood, based on the belief that it was effective at treating stomach disorders and intestinal parasites. D'Alessio's version of the libation contained other botanical ingredients in addition to wormwood. Competing brands developed shortly thereafter in eastern and southeastern France contained their own, proprietary mix of ingredients, including herbs, roots, and spices.

The name "vermouth" is the French pronunciation of the German word *Wermut* for wormwood that has been used as an ingredient in the drink over its history. Fortified wines containing wormwood as a principal ingredient existed in Germany around the 16th century. At about this time an Italian merchant named D'Alessio began producing a similar product in Piedmont as a "wormwood wine". By the mid-17th century, the drink was popular in England under the name "vermouth" which has been the common name for the beverage until the present day.

Over time, two distinct versions of vermouth became established, one pale, dry, and bitter, and the other red and sweeter. Merchant Antonio Benedetto Carpano introduced the first sweet vermouth in 1786 in Turin, Italy. The drink reportedly quickly became popular with the royal court of Turin.Around 1800 to 1813, the first pale, dry vermouth was produced in France by Joseph Noilly.However, not all pale vermouths produced over time have been dry, and not all red vermouths have been sweet.

The use of vermouth as a medicinal liquor waned by the end of the 18th century, but it gained popularity in Italy and France as an aperitif. The advent of the cocktail, in the late 19th century, found a new use for vermouth. Bartenders found that it was an ideal mixer for many cocktails, including the Martini (beginning in the 1860s) and the Manhattan (beginning around 1874). In addition, the popular Vermouth cocktail, first appearing in 1869, consisted of chilled vermouth and a twist of lemon peel with the occasional addition of small amounts of bitters ormaraschino. The popularity of vermouth-heavy cocktails in America, often using twice as much vermouth as gin or whiskey, continued through the 1880s and 1890s. Although the amount of vermouth used in cocktail recipes had somewhat declined, it has recently been experiencing a rise in popularity among a new breed of bartenders, as a key ingredient in many cocktails. It is this newfound popularity that is bringing vermouth back from its post-WWII slump. Vermouth gained popularity in the 1950s with help from the Martini, which was being marketed by the liquor companies. Product placement, and celebrity endorsements from personalities such as Ernest Hemingway, and Humphrey Bogart helped to skyrocket the Martini's fame. However, the most successful advertiser of the Martini was the fictional character James Bond.

How to Store

Unlike the sturdier, higher-proof spirits in your home bar, vermouth has a limited shelf life. Because its alcohol content is relatively low (18 percent), vermouth will begin to oxidize once it's been exposed to air, and its flavor will go off over time. To keep this aromatic fortified wine tasting its very best, store opened bottles in the fridge for no longer than a month or two.

Wet or Dry Martinis: Just How Much Vermouth Should You Pour?

When people talk about "wet" or "dry" Martinis, they're referring to the amount of vermouth added to the mix. And this amount has long been the subject of barroom debate.

Early Martinis were definitely on the wetter side (recipes from the 1900s call for equal parts vermouth and gin!).

On the other end of the spectrum, Winston Churchill preferred his drinks considerably drier. The politician was famously said to have made his Martinis by pouring some gin into a cocktail pitcher and "glancing briefly at a bottle of vermouth" across the room.

8.5Types & Brand names

A key ingredient in cocktail greats such as the Martini and the Manhattan, vermouth is a must-have for any well-stocked home bar. Taking its name from the German word "Wermut," meaning wormwood, vermouth is an aromatic fortified wine flavored with herbs, roots, bark, flowers and other botanicals. It comes in two basic styles: sweet and dry, each with different cocktail uses.

- **Sweet Vermouth (aka Italian vermouth, red vermouth, vermouth rosso)** The earliest commercial vermouths came out of late 18th Century Italy (Martini & Rossi was a famous maker of the time who's still a giant in the market today), and for that reason any sweet, red vermouth made in this tradition now (regardless of its country of origin) is known as "Italian vermouth."Cocktail Uses: Manhattans, Rob Roys, Negronis, Bronxes,Americanos, and others

- **Dry Vermouth (aka French vermouth, white vermouth, vermouth secco)** In the early 19th Century, French winemaker, Joseph Noilly, arrived on the scene with his own style of vermouth, which was pale in color and much drier. Noilly Prat is still a leading maker of this style of aromatic fortified wine, which is still referred to as "French vermouth" regardless of where it was made.Cocktail Uses: Martinis, Gibsons, Algonquins, Bronxes, and others

Vermouth as an Aperitif

Of course, vermouth isn't just for mixing. Both sweet and dry vermouth can be enjoyed on their own over ice as an aperitif. (A mixture of half dry, half sweet is especially good.) A twist or slice of lemon or orange makes a nice addition to the mix.

8.6 Bitters : Definition

A **bitters** is traditionally an alcoholic preparation flavored with botanical matter such that the end result is characterized by a bitter or bittersweet flavor. Numerous longstanding brands of bitters were originally developed as patent medicines, but are now sold as digestifs and cocktail flavorings.

8.7Facts file

The earliest origins of bitters can be traced back as far as the ancient Egyptians, who may have infused medicinal herbs in jars of wine. This practice was further developed upon the emergence of the Middle Ages, where the availability of distilled alcohol coincided with a renaissance in pharmacognosy, which made possible far more concentrated herbal bitters and tonic preparations. Many of the various brands and styles of digestive bitters made today reflect herbal stomachic and tonic preparations whose roots are claimed to be traceable back to renaissance era pharmacopeia and traditions.

By the 19th century, the British practice of adding herbal bitters (used as preventive medicines) to Canary Wine had become immensely popular in the American colonies. By 1806, American publications referenced the popularity of a new preparation termed *cocktail*, which was described as a combination of "a stimulating liquor, composed of spirits of any kind, sugar, water, and bitters.

Of the commercial aromatic bitters that would emerge from this period, perhaps the most well known is Angostura bitters, which was first compounded in Venezuela in 1824 by German physician Dr. Johann Gottlieb Benjamin Siegert. Originally, Dr. Siegert's bitters was

compounded as a cure for sea sickness and stomach maladies, among other medicinal uses.[5] Dr. Siegert subsequently formed the House of Angostura, a company that previously sold the bitters to sailors. Angostura bitters was named after the town of Angostura in Venezuela, although the preparation contains no angostura bark, a medicinal bark which is named after the same town.

Another renowned aromatic bitters with 19th century roots is Peychaud's Bitters, which were originally developed by apothecary Antoine Amédée Peychaud in New Orleans, Louisiana, and is most commonly associated with the Sazerac cocktail.

A broadly popular style of bitters that emerged from the period is Orange bitters, the flavor of which ranges from dryly aromatic to fruity, and is most commonly made from the rinds of Seville oranges and various spices. Orange bitters are commonly called for in older cocktail recipes.

Bitters prepared from the tree bark containing the antimalarial quinine were occasionally included in historical cocktail recipes, which served to mask the intensely bitter flavor of this medicine. Trace quantities of quinine are still included as a flavoring in tonic water, which is used today mostly in drinks with gin.

Antique commercial bitters bottles are highly collectible, the oldest and rarest of which sometimes command prices in the tens of thousands USD.

8.8 Types & Brand names

Digestive bitters

Digestive bitters are typically consumed either neat or with ice at the end of a meal in many European and South American countries. Many, including popular Italian-style amaros and German-style Krauter liquors, are often used in cocktails as well.

Some notable examples of digestive bitters available today include:

Cocktail bitters

Cocktail bitters are typically used for flavoring cocktails in drops or dashes. In the United States, many cocktail bitters are classified as alcoholic non-beverage products. As such, they are often available from retailers who do not sell liquor, such as supermarkets in many US states.

Some notable examples of cocktail bitters include:

- Angostura bitters - Originally from Venezuela in 1830, currently from Trinidad and Tobago)
- Bittermens - Founded in 2007 in San Francisco, producing in New Orleans since 2013 - Xocolatl Mole (chocolate spice), Hopped Grapefruit, Burlesque Bitters (hibiscus, açai, quassia), 'Elemakule Tiki Bitters (clove, allspice, cinnamon, citrus), and Boston "Bittahs" (citrus, chamomile)

- Fee Brothers bitters - from Rochester, New York - aromatic, orange, mint, lemon, rhubarb, cherry and peach; most are alcohol free, and many contain glycerin, artificial flavorings, and/or dyes

- Peychaud's Bitters - Originally from New Orleans, LA but now produced in Kentucky

8.9 Definition & History of Liquers

A **liqueur** is an alcoholic beverage made from a distilled spirit that has been flavored with fruit, cream, herbs, spices, flowers or nuts and bottled with added sugar or other sweetener (such as high-fructose corn syrup). Liqueurs are typically quite sweet; they are usually not aged for long after the ingredients are mixed, but may have resting periods during their production to allow flavors to marry.

In the United States and Canada, where spirits are often called "liquor" (pronounced/ər, with stress on the first rather than the second syllable), there is often confusion over liqueurs and liquors, especially as many spirits today are available in flavored form (e.g. flavored vodka). The most reliable rule of thumb is that liqueurs are quite sweet and often syrupy in consistency, while liquors are not. Most liqueurs have a lower alcohol content (15–30% ABV) than spirits, but some contain as much as 55% ABV.

In parts of the United States, liqueurs may also be called **cordials** or**schnapps** while in large parts of the British Commonwealth, cordial means a concentrated non-alcoholic fruit syrup that is diluted to taste and consumed as a non-carbonated soft drink, and in Germany and Scandinavia, schnapps means a form of brandy or aquavit.

Liqueurs are historical descendants of herbal medicines; they were made in Italy as early as the 13th century and were often prepared by monks (e.g. Chartreuse).

Nowadays, liqueurs are made worldwide and are served in many ways: by themselves, poured over ice, with coffee, mixed with cream or other mixers to create cocktails, etc. They are often served with or after a dessert. Liqueurs are also used in cooking.

Some liqueurs are prepared by infusing certain woods, fruits, or flowers, in either water or alcohol, and adding sugar or other items. Others are distilled from aromatic or flavoring agents. Anise liqueurs have the interesting property of turning from transparent to cloudy when added to water: the oil of anise remains in solution in the presence of a high concentration of alcohol, but crystallizes when the alcohol concentration is reduced; this is known as the ouzo effect.

Layered drinks are made by floating different-colored liqueurs in separate layers. Each liqueur is poured slowly into a glass over the back of a spoon or down a glass rod, so that the liquids of different densities remain unmixed, creating a striped effect.

8.10 Production of Liqueurs

METHOD OF PRODUCTION The liqueurs are produced by two (2) basic methods. (1) Hot method.

(2) Cold method

The steps involved in the production are:

1. EXTRACTION: Flavouring agents are extracted from natural substances by any of these four methods
a) MACERATION: The flavourings are soaked in cold spirits and then crushed. Used in cases of soft fruits. Duration of 6 – 8 months.

b) INFUSION: It is maceration in warm spirit. This method is used in cases of herbs. Duration is of a couple of weeks.
c) COAGULATION: The spirit is bubbled through the flavouring agents to extract the flavour
d) BY PRESSURE: Mechanical presses are used to extract flavours.

2) DISTILLATION: The spirit along with the flavourings are distilled in a pot still under vacuum. This is done in cases of botanicals.

3) COMPOUNDING: (BLENDING) It is done to produce desired flavour and even the sweetening agents are added at this stage.

4) MATURING: Liqueurs must be allowed to mature for some time so that the ingredients get mixed properly. Some of the finest liqueurs are allowed to mature in Oak Casks while others may be matured in a stainless steel or in balance.

5) FINNING: The finning is done in a similar manner as it is done in wines to remove any sediment.

6) BOTTLING: While bottling, the alcoholic strength is adjusted along with sweetness and colour. Harmless vegetable dyes can be used for colouring. The clarity is checked and the bottle is ready for sale.

8.11Broad Categories of Liqueurs (Herb, Citrus, Fruit/Egg, Bean & Kernel)

- **Abisante-** Pale green, anise-flavored liqueur. Turns opalescent when dripped slowly over ice. Replacement for absinthe.
- **Absinthe-** An anise-flavored liqueur that was originally 136 proof and was outlawed for years in most countries. Abisante, Pernod and Herbsaint can be used to replace absinthe in cocktail recipes

- **Advocaat**- A liqueur from Holland made of egg yolks, brandy, sugar and vanilla that is often enjoyed straight or on the rocks.
- **Agavero-** A tequila-based liqueur flavored with the Damiana flower. It was created in 1857, uses a blend of 100% blue agave anejo and reposado tequilas that have been aged in French Limousin oak. It is popular to drink straight, on the rocks, or in cocktails such as the Bésame Cocktail.
- **Amaretto-** An almond flavored liqueur made with apricot pits. This liqueur is commonly paired with a coffee liqueur in drinks like a Toasted Almond or used as a smooth liqueur in shooters like the Alabama Slammer
- **Amer Picon-** A bitter French aperitif that can be hard to find, particularly in the United States. It has a distinct orange taste.
- **Aperol-** An Italian aperitif produced from a recipe developed in 1919. Its primary flavor is orange but also includes rhubarb, chinchona, genziana along with other "secret" herbs. Used in many cocktails including Rimbaud's Left Hand and Rhyme & Reason.
- **Averna-** An Italian bitter liqueur (or amaro) still produced from the original 1868 recipe of herbs, roots and citrus rinds with natural caramel for sweetness. The liqueur is a favorite digestif in Italy and is often served on the rocks, but it also makes a great mixer for cocktails.
- **Barenjaeger-** A honey-flavored liqueur produced in Germany whose beginnings were in medieval Europe.
- **Benai-** An American version of Benedictine.
- **Benedictine-** Made of herbs, roots and sugar with a Cognac base. Try Benedictine in a B&B.
- **Blackberry Liqueur, Blackberry-flavored Brandy-** The flavored brandy is sweeter than the liqueur and makes a wonderful blackberry sour.
- **Butterscotch Liqueur, Butterscotch Schnapps-** A liqueur made from a mix of butter and brown sugar hat tastes like butterscotch candy. Sometimes referred to as Buttershots (brand name produced by DeKuyper).
- **Cacao Mit Nuss-** Crème de cacao with a hazelnut flavor.
- **Campari-** A bitter Italian apèritif made with a unique blend of herbs and spices with orange being the dominant flavor. The secret recipe was originally developed by Gaspare Campari in 1860 for his Cafè Campari in Milan. Campari is often served on the rocks either by itself or mixed with club soda and is also a key ingredient in many apèritif cocktails such as Negroni and Americano
- **Chambord-** A liqueur that dates back to 1685 when Louis XIV visited Château de Chambord. Chambord is produced in the Loire valley in France and is made from red and black raspberries, honey, vanilla, and cognac.

- **Chartreuse-** An herbal liqueur produced by Carthusian monks in the French Alps. It is available as either Green or Yellow Chartreuse and as a special V.E.P. bottling of both varieties, which is aged for a longer period of time.
- **Cherry Heering**- A naturally flavored cherry liqueur from Denmark that is used in a variety of cocktails.
- **Cherry liqueur-** A tart fruit accent made of cherries and pits. A great on the rocks sipper as well. Also see maraschino liqueur...
- **Cinnamon Schnapps-** An often clear, higher proof distilled spirit that is flavored with cinnamon and used often in cocktails and shooters.
- **Coffee liqueur, Crème de Café-** Coffee-flavored liqueur. The most popular coffee liqueur is the Mexican Kahlua. Others include Tia Maria from Jamaica, Expresso from dark-roasted Italian coffee, crème de café , and Pasha from Turkey. Any of the coffee liqueurs are great served ice-cold with heavy cream floating on top and are popular ingredients in a variety of cocktails.
- **Cointreau-** A brand name orange-flavored liqueur that is considered a premium triple sec.
- **Crème d' Abricots, Apricot Liqueur, Apry-** Cream of apricot liqueur from France. Luscious when drizzled in a Champagne flute over cracked ice. Find it in cocktails like the Apricot Sunray and UK Sour.
- **Crème d' Almond-** A pink liqueur flavored with almonds and fruit stones. Similar to crème de noyaux.
- **Crème de Bananes, Banana Liqueur-** Cream of banana liqueur that is usually quite sweet and is true to the fruit's flavor.
- **Crème de Cacao-** Cacao (chocolate) and vanilla bean based liqueur. Available in both white and brown varieties. The white is used in a Grasshopper while the brown is used in an Alexander.
- **Crème de Cassis-** A sweet, low-proof liqueur made from French blackcurrants. It can be found in cocktails such as the Chimayo, Vermouth Cassis, Kir, and Cardinal, and is often paired with wine.
- **Crème de Cerise-** A sweet cherry-flavored liqueur.
- **Crème de Coconut, Coconut Liqueur, Batida de Coco-** Sweet coconut-flavored liqueurs, typically with a rum base. Batida de coco is a creamy liqueur, others are usually clear, though some are creamy as well.
- **Crème de Framboise-** A crème liqueur with a raspberry flavor.
- **Crème de Menthe-** This sweet liqueur flavored with mint leaves and is either white (clear) or green.

- **Crème de Mûre** - A sweet blackberry-flavored liqueur.
- **Crème de Noyaux-** A pink liqueur has a distinct almond flavor and is made with the stones of plums, cherries, peaches and apricots. This is not a very common liqueur, but is found in cocktails such as the Pink Squirrel.
- **Crème de Violette-** A purple violet flavored liqueur that was commonly used in classic cocktails such as the Aviation Cocktail. It lost some of its popularity because of import issues until the late 1990's and has since become a favorite ingredient for reviving the classics and using in modern creations. The most popular brand is Rothman & Winter. Other cocktails include the Armani Signature Code and Eagle Cocktail.
- **Curaçao-** Made of the dried peels of laraha oranges and was the original orange liqueur, used in many classic cocktails. Normally it is orange in color but can also be white, blue or green.
- **Cynar-** An artichoke-based bitter liqueur that was launched in 1952. Despite its base, it does not have the distinct flavor of the artichoke because it also includes a blend of thirteen herbs and plants. The aperitif is commonly paired with orange juice and soda or tonic and has been used in a number of modern cocktails including Fall from Grace, Game Set Match, Happily Ever After, and Warm Fuzzies.

8.12 Popular Liqueurs of the World : history

Fruit liqueurs: Bajtra (prickly pear): Crème de Banane, Hpnotiq (tropical fruit), Kruškovac (pear), Lichido (lychee), Manzana verde (apple), Midori (melon), Pore William (pear), Pisang Ambon (banana), Pucker (apple), Southern Comfort (neutral grain spirits, peach, and (spices), Prunelle (plum).

Berry liqueurs: Crème de Cassis (blackcurrant), Cherry Heering (cherry), Blueberry, Buckthorn, Crème de Cerise, Guavaberry (guavaberry), Lillehammer (lingonberry), Whidbeys (loganberry), Polar Cranberry, Chambord (raspberry) , Lakka or Lakkalikööri (Cloudberry), Hideous (berry and citrus), Maraschino (cherry), Sloe Gin (sloe berries).

Citrus Liqueurs: Aurum (brandy & orange peel), Cointreau (orange), Curaçao (bitter orange), Grand Marnier (Cognac & orange), Limoncello (lemon), Mandarine Napoleon (tangerine skins & Brandies), Tuaca (brandy, vanilla, and citrus), Sabra (dark chocolate and Sabra oranges), Van Der Hum (Mister what's his name, South Africa), X-Rated Fusion Liqueur (blood orange, mango and passion fruit), Yukon Jack (Canadian whiskey and oranges).

Mixed and Single Herb Liqueurs: Aftershock (several varieties from Cinnamon to citrus), Amaro (disgestif), Bénédictine DOM (herbal) Beirão (seeds and herbs), Chartreuse (130 herbal extracts), Crème de Menthe (sweet, mint), Danzig Goldwasser (herbs), Drambuie (honey, herbs & scotch), Fior D'Alpi (Alpine flowers, wild herbs), Glayva (Scotch, anise, clove, herbs, heather honey, tangerine, other citrus fruits, and almonds) , Goldschläger (cinnamon schnapps), Irish

Mist (Irish whiskey, heather and clover honey, herbs), Izarra (yellow- Izarra 32 herbs, green Izarra 48 herbs), Krupnik (vodka, honey 7 herbs), Kümmel (caraway seed, cumin, and fennel), Strega (70 herbs, mint , fennel), Rumpleminze (peppermint).

8.13 Facts File

Presented in distinctively shaped, coloured and sized bottles, liqueurs offer a vast array of flavors', are often steeped in a rich cultural heritage, for some people are a symbol of their national identity and are the basis of some of the world's most famous mixed drinks and cocktails. Liqueurs antecedents were the apothecaries' potions and medicines of the middle ages, which were flavored with herb, plant, seeds, spices, nuts, roots, flowers and fruit essences came to be added to mask the unappealing flavour of the impurities that had not been rectified out of the base spirit and to endow the resulting drink with medicinal value. This chapter introduces the learner to liqueurs, we will focus on their history, and their many varied ingredients, the production process used to make liqueurs and the main categories of liqueurs. We will also explore some of world's most famous liqueur brands, and examine the tasting and service traditions of these famous beverages

8.14 Country of origin

Liquor is created by a distilling process that produces ethanol by a means of fermenting potatoes, grains, fruits, or vegetables. Liquor does not include other alcoholic beverages such as wine, beer, and cider which are not distilled and are lower in alcohol content. In the US we commonly distinguish between distilled and uninstalled alcoholic beverage by calling liquor a "hard liquor". There are numerous types and variations of Liquor or spirits available over-the-counter. There are however 6 main types of liquor that are readily available and advertised throughout the US.

- Vodka
- Gin
- Tequila

Many believe that most Vodkas are made from potatoes. However these days Vodka is mostly made from barley, wheat, corn, and sorghum.According to some sources Vodka may have had it's beginnings in what is now considered to be the country of Russia during the 9th century. Most historians believe that the liquor was, at that time, used for medicinal purposes. The Gin and Vodka Association (GVA), believes that the first documented official distillery was probably in operation nearly two hundred years later. The earlier vodka was more primitive by today's standards and contained amounts of color, smell, and flavor. The alcohol content may have been lower than 14%.

Sometime during the 14th century Vodka became a popular drink in Poland. The word "Vodka" originates from the polish word "Wodka" which originally defined the beverage as a medicine or cosmetic cleanser. The vodka beverage that was consumed at that time was

called *gorzałka*. Large scale production of vodka began sometime in the 16th century in the city of Krakow.

Russian Vodka has it beginnings, according to a legend, around 1430 when a monk called Isidore from Chudov Monastery inside the Moscow Kremlin made a recipe of the first Russian vodka. The monk had a special knowledge of the distillation process and was able to usher in a higher quality beverage.

Vodka is made by taking the same fermenting process as beer and wine and adding distillation. The distillation process raises the alcohol strength to anything above 40% and can reach as high as 95%. It is a common practice to add spring water to the vodka to insure the alcohol strength to 40% before bottling. Vodka is not aged.

Due to distillation and filtering processes most vodkas lack any flavor. Many brands have developed flavored varieties of vodka that include, fruit, citrus, spice, almond, and vanilla.Unlike vodka, whiskey is an aged beverage. In addition, whiskey has numerous variations in how the wide variety of whiskies are produced.It is thought that the beverage we know as whiskey has it's roots in Scotland and Ireland. During the days of the 13th to 14th centuries the habitants of these islands lacked the ability to distill alcohol from wine because of the lack of availability of grapes. They used barley mash or beer in place of wine. The end result was the birth of modern day whiskey.

Scotch Whiskey, often called simply "Scotch", is produced from grains that have been smoked in special peat moss smokers to arrive at a particular or desired taste. To be called "Scotch", the whiskey must be aged at least 3 years in oak casks, normally distilled at least twice, and must be made in Scotland. The casks or barrels used for aging have usually been previously used for making bourbon or sherry.

Bourbon Whiskey, an American style of whiskey, must contain at least 51% corn, and must be aged in charred oak barrels for at least 2 years. Similar to Scotch in that it needs to be made in Scotland all Bourbon Whiskey must be made in the United States.

Irish Whiskey is made in Ireland. There are two types of Irish whiskey: Single Malt and Blended. Single malts are made of pure barley, while blends are a combination of single malts and grain whiskeys that have been produced using other grains such as corn and wheat. Generally speaking, blended whiskey has a lighter taste that many consumers prefer. Single malts, however, are considered the more pure form and are usually much more expensive.

Canadian Whiskey is very similar to the blended styles of American and Irish Whiskies. It must be made in Canada, and aged for at least 3 years in wooden barrels. Canadian whiskies are known for being very smooth and drinkable.

Tequila origins and how Tequila is made.

All tequila is made from the agave plant and all tequila is made in Mexico. Agave plants are harvested with large thick trunks. The spiny leaves are removed before being processed for fermentation. The plants are then cut up and the juices are fermented to become Tequila.

Modern day Tequila has it's origins placed sometime during the 16th century at or near the Mexican town of Tequila. Previous to the 16th century Aztec indians had fermented a beverage they called Octli from the same agave plant that tequila is made. The spanish conquistadors began producing an agave beverage when they ran out of brandy. This new beverage, known now as Tequila, was the first North American distilled spirit.

Tequila is made as clear or colored depending upon how long it is aged in oak barrels. The clear type is bottled immediately after distillation while the much darker type is normally aged a minimum of 3 years.

The modern day distilled rum got it's beginnings in the Caribbean when slaves discovered that molasses, a sugar processing by-product, could be fermented into alcohol. Later, distillation of these alcoholic byproducts concentrated the alcohol and removed impurities, producing the first true rums. Rum was also discovered to be present in Brazil in the 16th century.

Rum is made, like other liquors, by fermentation and distillation processing. The clear liquid is then aged in barrels to obtain it's darker color and variations in taste. Rum can also be flavored with spices, caramel, coconut, and citrus.

Gin was originally invented by the Dutch physician Franciscus Sylvius as a treatment for medical problems such as kidney desease, lumbago, gallstones, and gout. It was also found by English troops who were fighting against the Spanish in the Eighty Years' War who noticed its calming effects before battle.

Gin is processed in much the same manner as vodka accept with the infusion of juniper berries to produce a dry and clean flavor. Gin is often flavored with orange peel, anise, licorice, cinnamon, and coriander.

8.15 Summary

- Liqueurs were originally used (and some still are) as a digestive.

- They are now usually served after dinner but also play an important role in many famous cocktails.
- Liqueurs are also favoured in the kitchen for their natural sweetness, which flavour and enhance the meal experience for example Grand Marnier (duck l'orange and soufflé) and particularly for desserts.
- Today liqueurs are made worldwide and are served in many ways: poured straight, over cubed or crushed ice (Frappe), with coffee (speciality coffees), mixed with cream or as other mixers to create long drinks .
- A good well sourced, reasonably priced liqueur selection appropriate to your market, actively promoted to your customers can help your bar distinguish itself.

Customers are constantly looking for new social, cultural and recreational experiences in their food and drinks offerings, liqueurs can help your bar introduce or re-introduce them to the flavours of the world, which will satisfy not only their gastron

8.16 Question

1. Write the Definition of Aperitifs
2. How many Types of Aperitifs
3. Write the Vermouth Definition,
4. Write about the Types & Brand names of vermouth
5. Write about the Production of Liqueurs
6. How many Broad Categories of Liqueurs
7. Write a short note on Popular Liqueurs of the world

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UNIT 9

COCKTAILS & MOCKTAILS

Structure

9.1Objective

In this unit the learner will understand the origin of the cocktails and mocktails, the learner will also be able to identify various components of cocktails and processes of making cocktails and mocktails.

The leaner will also be able to understand the various recipes of cocktails based on the various alcoholic beverages. The learner would be able to list various equipment used in cocktail making

9.2 Introduction

There is great controversy over the actual derivation of the term cocktail. Betsy, a barmaid in a tavern in Hall's Corners, NY, served Betsy's Bracers. During the Revolutionary War, American & French soldiers frequented it. American soldiers stole some male pheasants from the British & a wild party was had. While drinking they toasted to Betsy's drink "Here's to the divine liquor which is as delicious to the palate, as the cock's tails are beautiful to the eye." To which a French officer replied, "Vive le cocktail!". There is reference to a Betsy Flanagan. Who knows which Betsy, was Betsy Flanagan. One story goes something along the lines of decorating the out side of a glass with a tail feather from a rooster. Some say that this is where Washington and his officers frequented. Washington wore feathers in his hat, and one of his officers toasted to "the cock's tail".

There is another tavern also In NY that claims it was the original. The tavern keeper used his witty stories, and daughter's beauty to gain favor with good patrons. The daughter, Peggy mixed a powerful concoction which recipe was held secret. She was in love with a sailor. Upon his return with a promotion, and a prized fighting cock, named Lightning, he asked for her hand. In their honeymoon bed, Lightning crowed, and shook loose a tail feather, which she put in his concoction that she had made. She said, "Lightning names this drink! Drink this cocktail, sir, to your success with my father, and as a pledge to our future happiness!" This was a sign of good fortune & they used the sign of the tail feather on their tavern emblem for many years to come.

A drink called "cock's ale" was served in early colonial times during cock fights. It was a mixture of ale into which a sack of a par-boiled chicken, raisins, mace and brown sugar was placed. This was left to ferment for about ni

Amedee Peychaud, born in France and creator of Peychaud And yet another colonial story is that the tap for pouring ale was referred to as a "cock". Signs would show a cock and a bottle. When the bottom of the barrel was reached, it was called the "cock tail". A Colonel Carter of Virginia was served a poor quality cock tail and proclaimed, "Hereafter, I will drink cocktails of my own brewing".

Some time around 1800, King Axoloti VII of Mexico was meeting with an American General of the Southern States to discuss a peace treaty. The King asked the General if he would like a drink & a beautiful girl brought one cup, adorned in jewels. It was embarrassing for both, as one would have to drink first. Seeing this, the girl drank it. Her name was Coctel. The General promised to immortalize her name.

The Sazerac is also reported to be the first cocktail. Antoine Bitters was it's inventor. Peychaud invented his bitters in Santo Domingo and brought the recipe to New Orleans with him. He opened a drugstore called Pharmacie Peychaud on Royal Street. Friends gathered frequently to sample his drinks served in a coquetier which is the French word for an egg cup. The mispronunciation of cocquetier resulted in the term cocktail.

Some say it originated in England. Horses of superb quality, but of mixed origins would have their tails docked to identify them. They were known as "cocktails". A Dr. Johnson, familiar with the term, mixed his friend Boswell a drink of wine laced with gin. He told him, "to mix spirits to wine smacks of our alcoholic hyperbole. It would be a veritable cocktail of a drink." Another English story points to the officers of the Second Regimen of the Royal Sussex Fusileers. Other regimens called the officers, who wore plumes in their caps, "the cocktails".

In Mississippi, during the riverboat gambling days, men fought each other and the winner got to wear a red cock's feather in his cap. He was then known as the "Cock of the Walk". They also

would drink every spirit in the boat's lounge in a glass that resembled a breast of a cock, with a stirrer that resembled a tail feather.

9.3 Types of cocktails & Tools:

Cocktails can be separated into two main categories:

- Short drinks typically contain between 6 to 12 cl. of liquids and tend to be consumed as a digestive drinks. These Short Drinks are strong and contain a lot of alcohol.

- Long drinks typically contain between 12 and 25 cl. of fluids and can be enjoyed as aperitif or as a thirst quenching daytime beverage, as they are less strong than the short drinks.

TOOLS

- *The shaker*: There are some shaker that are made of 3 separate parts, with the middle part holding a fixed filter. Those shakers are not always as waterproof as they should be. Using a professional model like the Boston shaker is advisable. These shakers are made of 2 parts: the cup en a top with a filter aka the strainer. Metal shakers are preferred over the glass types.
- a mixing glass with a long spoon, logically named a bar spoon.
- an ice bucket
- an ice tong
- a fruit press
- a cork screw that includes a small knife which can be used to remove lids.
- a bottle opener
- a fruit knife and plate

Additional tools:

- a siphon with CO_2 cartridge to make "fresh" soda water
- a measuring jigger
- a straw holder
- a nutmeg grater
- small plates (for rimming the glasses with salt or sugar)
- a sugar sprinkler
- a very thin & long knife to carve fruit for garnish and side decoration.
- a bottle cap for opened wine of champagne bottles.
- a can opener
- an (electronic) mixer / blender.

9.4 Methods of Making Cocktails

Shaking

When a drink contains eggs, fruit juices or cream, it is necessary to shake the ingredients. Shaking is the method by which you use a cocktail shaker to mix ingredients together and chill them simultaneously. The object is to almost freeze the drink whilst breaking down and combining the ingredients. Normally this is done with ice cubes three-quarters of the way full. When you've poured in the ingredients, hold the shaker in both hands, with one hand on top and one supporting the base, and give a short, sharp, snappy shake. It's important not to rock your cocktail to sleep. When water has begun to condense on the surface of the shaker, the cocktail should be sufficiently chilled and ready to be strained.

Straining

Most cocktail shakers are sold with a build-in strainer or hawthorn strainer. When a drink calls for straining, ensure you've used ice cubes, as crushed ice tends to clog the strainer of a standard shaker. If indeed a drink is required shaken with crushed ice (ie. Shirley Temple), it is to be served unstrained.

Stirring

You can stir cocktails effectively with a metal or glass rod in a mixing glass. If ice is to be used, use ice cubes to prevent dilution, and strain the contents into a glass when the surface of the mixing glass begins to collect condensation.

Muddling

To extract the most flavor from certain fresh ingredients such as fruit or mint garnishes, you should crush the ingredient with the muddler on the back end of your bar spoon, or with a pestle.

Blending

An electric blender is needed for recipes containing fruit or other ingredients which do not break down by shaking. Blending is an appropriate way of combining these ingredients with others, creating a smooth ready to serve mixture. Some recipes will call for ice to be placed in the blender, in which case you would use a suitable amount of crushed ice.

Building

When building a cocktail, the ingredients are poured into the glass in which the cocktail will be served. Usually, the ingredients are floated on top of each other, but occasionally, a swizzle stick is put in the glass, allowing the ingredients to be mixed.

Layering

To layer or float an ingredient (ie. cream, liqueurs) on top of another, use the rounded or back part of a spoon and rest it against the inside of a glass. Slowly pour down the spoon and into the glass. The ingredient should run down the inside of the glass and remain seperated from the ingredient below it. Learning the approximate weight of certain liqueurs and such will allow you

to complete this technique more successfully, as lighter ingredients can then be layered on top of heavier ones.

Flaming

Flaming is the method by which a cocktail or liquor is set alight, normally to enhance the flavor of a drink. It should only be attempted with caution, and for the above reason only, not to simply look cool.

Some liquors will ignite quite easily if their proof is high. Heating a small amount of the liquor in a spoon will cause the alcohol to collect at the top, which can then be easily lit. You can then pour this over the prepared ingredients. Don't add alcohol to ignited drinks, don't leave them unattended, light them where they pose no danger to anybody else, and ensure no objects can possibly come into contact with any flames from the drink. Always extinguish a flaming drink before consuming it.

9.5 Classification of Cocktails

Whiskey Based Cocktails

Name	Ingredients	Method	Glass	Garnish
Manhattan	45 ml Canadian Club 30 ml Vermouth(Red) Cocktail Cherry	Stirred	Cocktail	Cherry
Robroy	45 ml Scotch 30 ml Vermouth(Red) Dash of Angoustra bitter	Stirred	Cocktail	Cherry
Godfather	45 ml Scotch 15 ml Ammeretto Galliano Ice	Poured Straight into the Glass	Old Fashioned	Nil
Old Fashioned	1 Cube Sugar 1 Dash of Angoustra Bitter 60 ml Bourbon	Poured muddle sugar dissolve Add Bourbon	Old Fashioned	Orange Slice Cherry

Whisky Sour	60 ml Whisky 15 ml Lemon Juice ½ Egg White Sugar Syrup Dash of Angoustra	Shaken	Parfait	Lemon Slice
Rusty Nail	60 ml Scotch 30 ml Drambuie	On the Rocks	Old Fashioned	Lemon twist

Gin Based Cocktails

Name	Ingredients	Method	Glass	Garnish
Martini (Dry)	60 ml Dry Gin 2 drops Dry Vermouth Olive	Stirred	Cocktail	Pitted Olive
Pink Gin	45 ml Gin 4 dash Angoustra 30 ml Water	Swirl Bitter. Add the Gin	Red wine Glass	Nil
Pink Lady	60 ml Gin 4 dash Grenadine ½ Egg White	Shaken	Champagne Saucer	Cherry
White Lady	60 ml Gin 30 ml Cointreau ½ Egg white	Shaken	Cocktail	Cherry
Blue Lady	60 ml Gin 30 ml Blue Curacao ½ Egg white	Shaken	Cocktail	Lemont

	15 ml Lemon Juice			
Singapore Sling* *Original Singapore Sling(Raffles)	45 ml Gin 15 ml Cherry Brandy 15 ml Lemon Juice	Shaken and topped with Soda	Hi Ball Glass	Lemon Slice Cherry

Rum Based Cocktails

Name	Ingredients	Method	Glass	Garnish
Daiquiri* *(Frozen Daiquiri)	45ml White Rum 10 ml Lemon Juice 10 ml Sugar Syrup	Shaken	Cocktail	Lemon Twist
Cuba Libre	60 ml Rum Cola 15 ml Lemon Juice	Poured	Collins	Lemon Wedge Lemon Slice
Planters Punch	60 ml Dark Rum 120 Orange Juice 120 ml Pineapple Juice	Poured Float Rum on top	Zombie	Orange Slice Cherry
Pina Colada	45 ml White Rum 60 ml Pineapple Juice 60 ml Coconut Milk sweet 15 ml Cream	Blended	Parfait Glass	Pineapple Slice Cherry

Zombie	30 ml Dark Rum 30 ml White Rum 30 ml Demarara Rum 4 dash Apricot Liquer Pineapple Juice	Shaken	Zombie	Pineapple Slice Mint Leaf Cherry

Brandy Based Cocktails

Name	Ingredients	Method	Glass	Garnish
Brandy Alexander	30 ml Brandy 30 ml Crème DeCacao 30 ml Fresh Cream	Shaken	Champagne Saucer	Grated Nutmeg
Side Car	30 ml Brandy 15 ml Cointreau 15 ml Lemon Juice Ice	Shaken	Cocktail	Lemon Twist
Stinger	45 ml Brandy 15 ml Crème deMenthe Ice	Shaken	Cocktail	None
Between the Sheets	15 ml Brandy 15 ml Cointerau 15 ml White Rum 10 ml Lemon	Shaken	Cocktail	Lemon Twist

	Juice			

Vodka Based Cocktails

Name	Ingredients	Method	Glass	Garnish
Screwdriver	45 ml Vodka Orange Juice	Poured	Hi Ball Glass	Orange Slice
Black Russian	45 ml Vodka 15 ml Galliano Orange Juice	Poured	Old Fashioned	Nil
Harvey Wallbanger	45 ml Vodka 15 ml Galliano Orange Juice	Shaken	Hi Ball Glass	Orange slice Cherry
Salty Dog	45 ml Vodka Grape fruit Juice Salt	Poured Frost the rim with the Salt	Hi Ball Glass	Grape Frit Slice Salted Rim
Bloody Mary	60 ml Vodka Dash Of Worcestershire Dash Of Tabasco Salt Pepper Tomato Juice	Poured Frost the rim with the Salt	Hi Ball Glass	Lemon wedge
Cosmopolitan	45 ml Vodka 15 ml Cointreau 15 ml Cranberry Juice	Shaken	Cocktail	Orange Twist

Sea Breeze	45 ml Vodka Orange Juice Grape Fruit Juice	Poured	Hi Ball Glass	Orantge slice

Other Favourites

Name	Ingredients	Method	Glass	Garnish
Margarita Blue Margarita	45 ml Tequilla 15 ml Cointreau 30 ml Lemon Juice Salt	Shaken Frost the rim with salt	Champagne Saucer	Lemon slice
Blackl Velvet	½ Champagne ½ Beer	Poured	Champagne Tulip	Nil1

Non Alcoholic Beverages Mocktails

Name	Ingredients	Method	Glass	Garnish
Noor- e-Nishat	Assorted Juices Vanilla Ice Cream Pomegranate Syrup	Blended	Fancy Collins	Slice opf Apple and Cherry
Firdaus	Khus Syrup Mint Lime Juice Salt and Pepper Soda	Shaken	Fancy Collins	Mint sprig Sweet lime Slice Cherry
Maikhana Special	Orange juice Pineapple Juice Mango Juice Dash Of Fresh Lime Grenadine Syrup	Shaken	Fancy Collins	Pineapple slice Cherry
Lajawab	Mango Juice Orange Juice Pineapple Juice Fresh Cream	Blended	Hi Ball Glass	Slice of Sweet Lime Cherry

Mughal Cooler	Watemelon MuskMelon Fresh pineapple		Tall Glass	Slice of watermelon Lemon wedge
Dessert Chiller	Cucumber and Mint Yoghurt Soda/Water	Shaken	Collins	Slice of Cucumber
Cool Breeze	Ginger Ale Grenadine Gyrup Lime juice	Stirred/Built	Collins	Lemon wedge Cherry
Naazneen	Rose Petals Cardamom Pomegranate Syrup		Fancy Tall Glass	Lemon wedge Rose Petal
Fruit Punch	Assorted Juices Grenadine Syrup Fresh Cream	Blended	Tall Glass	Orange slice Cherry
Name	Ingredients	Method	Glass	Garnish
Gulmarg	Orange Juice Mango Juice Grape Juice Rose syrup	Shaken	Fancy Glass	Black Grapes Lemon slice
Wave Bender	Orange Juice Lemon Juice Grenadine Syrup Ginger Ale	Shaken/Stirred	Hi Ball Glass	
Virgin Banana Colada	Banana Juice Pineapple Juice Coconut Cream Ice	Blend	Hi Ball Glass	Pineapple Slice Cherry
Virgin Pina Colada	Pineapple Juice Fresh coconut Cream	Blended	Collins	Pineapple Slice
Pineapple Snow	Pineapple Lemon Juice Coconut Powder Vanilla Ice Cream Honey		Collins	Pineapple slice Cherry
Mangola	Fresh Mango		Fancy	Mango Slice

	Mango Juice Ice Cream		Collins	
Grape Cooler	Grape Juice Fresh Musk Melon Orange Juice Lemon Juice		Hi Ball Glass	Black Grapes Lemon wedge
Virgin Mary	Tomato Juice Worcestershire Sauce Tabasco Lemon Juice Salt and Pepper		Fancy Collins	Lemon wedge
Elephant Charger	Orange Juice Milk Ripe Bananas Raspberries Vanilla Icecream	Blended	Collins	Raspberries
Passion Fruit Spritzer	Lemon Juice Passion Fruit Juice Soda/Water	Stirred	Collins	Mint sprig
Name	Ingredients	Method	Glass	Garnish
Jungle Cooler	Pineapple Juice Orange Juice Passion Fruit Squash Coconut Milk	Blended	Collins	Pineapple Mint Sprig
Flamingo	Cranberry Juice Pineapple Juice Club soda	Stirred	Hi Ball Glass	Lemon wedge
Banana Bracer	Banana Milk Pineapple juice Coconut Cream Crushed Ice	Blended	Collins Glass	Cherry
Everest Special	Orange Juice Bitter Lemon Dash Of Angoustra	Stirred	Tall Glass	Orange Slice Cherry
Tender	Double Cream	Blended/Stirred	Tulip	Strawberry

Berry	Grenadine Syrup Ginger Ale Dry Ginger			slice
Fruit Cup	Orange Juice Ppineapple Juice Apple Juice Apple Slice Kiwi fruit Strawberry Orange	Shaken	Hi Ball Glass	Fruits ColorStraw

9.6 TYPES OF GLASSWARE

Name : **Liqueur Glass**
Capacity : 3 oz
Uses : Liqueurs, straight up, Lime JuiceLime Cordial
Sugar Syrup

Name : **Jigger or Shot Glass**
Capacity : 3 oz
Uses : Liquor, straight up
Tequila

Name : **Cocktail Glass**
Capacity : 4.5 oz
Uses : Cocktails like Martini, Gimlet, Rob Roy, Grasshopper
Liqueur Frappes

Name : **Sherry Glass**
Capacity : 4.5 oz
Uses : Sherry
Port
Cinzano Bianco and Rosso
Martini Bianco and Rosso
Nouilly Prat
Dubonnet

Name : **Juice Glass or Pony Tumbler**
Capacity : 5 oz
Uses : Fruit juices as part of breakfast
Juice and soft drinks in banquets

Name : **Parfait Glass**
Capacity : 5 oz
Uses : Parfaits
Cocktails like Whisky Sour

Name	**:**	**White Wine Glass or Hock Glass**
Capacity	**:**	5.5 oz
Uses	**:**	White wine
		Rose wine
Name	**:**	**Champagne Saucer**
Capacity	**:**	6 oz
Uses	**:**	Champagne
		Sparkling wine
		Cocktails like Daiquiri, Pink Lady, Side Car, Margarita, White Lady
Name	**:**	**Champagne Flute**
Capacity	**:**	6 oz
Uses	**:**	Champagne
		Sparkling wine
N**ame**	**:**	**Red Wine Glass**
Capacity	**:**	7 oz
Uses	**:**	Red Wines
		Irish Coffee
Name	**:**	**Highball Glass**
Capacity	**:**	8.5 oz
Uses	**:**	Water in room service, coffee shop
		Mineral water
		Hard liquor like gin, vodka, rum with soda, tonic water, water ,Fruit juices
		Cocktails like Screwdriver, Gin Fizz, Aperitifs like Pernod, Campari with mixers
Name	**:**	**Roly Poly**
Capacity	**:**	9 oz
Uses	**:**	Drinks on the rocks
		Cocktails like Rusty Nail, Bloody Mary, Salty Dog
		Mocktails like Virgin Mary
		Crudites
Name	**:**	**Old Fashioned Glass**
Capacity	**:**	9 oz
Uses	**:**	Whisky on the rocks
		Cocktails like Whisky Old Fashioned
Name	**:**	**Champagne Tulip**
Capacity	**:**	9 oz
Uses	**:**	Champagne
		Sparkling wine
		Cocktails like Singapore Sling, Pina Colada, Mai Tai
		Coupes

Name	**:**	**Brandy Balloon, Brandy Snifter or Brandy Inhaler**
Capacity	**:**	9 oz, 13 oz
Uses	**:**	Brandy
		Cognac
		Armagnac
		Coupes
Name	**:**	**Water Goblet**
Capacity	**:**	10 oz
Uses	**:**	Flat and sparkling water
Name	**:**	**Pilsner Glass**
Capacity	**:**	10 oz to 12 oz
Uses	**:**	Beer
Name	**:**	**Beer Mug**
Capacity	**:**	10 oz to 12 oz
Uses	**:**	Beer
Name	**:**	**Collins Glass**
Capacity	**:**	12 oz
Uses	**:**	Fresh lime soda and water
		Soft drinks
		Lassi
		Milkshakes
		Cold coffee
		Ice cream soda
		Squashes
		Cocktails like Tom Collins
Name	**:**	**Zombie Glass**
Capacity	**:**	13.5 oz
Uses	**:**	Tall drinks
		Cocktails like Zombie
Name	**:**	**Beer Goblet**
Capacity	**:**	14 oz
Uses	**:**	Beer

CARE OF GLASSWARE

1. As the bottom of the glass may acquire white stains due to chlorination, lemon is to be applied to remove such stains.
2. All glasses should be held at the base or at the stem.
3. Use clean, flint less cloth for wiping.

4. Immerse glass in hot water before wiping to eliminate water spots.
5. Hold against light to check for smudges and stains.
6. Discard any cracked and chipped glasses at once.

9.7 Bartending terminology

A lot of the terms and phrases listed below are standard throughout the industry. A good bartender will know his profession inside out, and the ability to understand various words related to bartending is a must.

Box :- Pour into and out of a shaker, usually only once. Gives the drink a quick mixing without shaking.

Call Drink :- A liquor and mixer, of which the liquor is a defined brand. (ie. Tanqueray and Tonic, Bacardi and Coke)

Cobbler :- A tall drink of any liquor served in a Collins or highball glass with shaved or crushed ice and garnished with fresh fruit and mint sprigs.

Chaser :- A mixer that is consumed immediately after a straight shot of liquor to create a different taste.

Cocktail:- Any of various alcoholic beverages consisting usually of brandy, whiskey, vodka, or gin combined with fruit juices or other liquors and often served chilled.

Collins:- A drink akin to a sour which is served in a tall glass with soda water or seltzer water.

Cooler:- A drink consisting of ginger ale, soda water, and a fresh spiral or twist of citrus fruit rind, served in a collins or highball glass.

Crusta:- A sour-type drink served in a glass that is completely lined with an orange or lemon peel cut in a continuous strip.

Cup:- A punch-type drink that made up in quantities of cups or glasses in preference to a punch bowl.

Daisy:- An oversize drink of the sour type, normally made with rum or gin. It is served over crushed ice with a straw, and sweetened with a fruit syrup.

Lace:- Normally applies to the last ingredient in a recipe, meaning to pour onto the top of the drink.

Eggnog:- A traditional holiday drink containing a combination of eggs beaten with cream or milk, sugar, and a liquor such as brandy, rum, or bourbon.

Fix:- A sour-type drink similar to the daisy, made with crushed ice in a large goblet.

Fizz:- An effervescent beverage. (ie. that which is carbonated or which emits small bubbles.)

Flip:- A chilled, creamy drink made of eggs, sugar, and a wine or spirit. Brandy and sherry flips are two of the better known kinds.

Frappé:- A partially frozen, often fruity drink. It is usually a mixture of ingredients served over a mound of crushed ice.

Grog:- A rum-based beverage with water, fruit juice and sugar, commonly served in a large mug.

Highball:- Any spirit served with ice and soda water in a medium to tall glass (often a highball glass).

Julep:- A drink made of bourbon, mint, sugar and crushed ice.

Lowball:- A short drink made of spirits served with ice, water or soda in a small glass.

Mist:- A liquor served over a glass filled with crushed ice, often a way of serving liqueur as an after dinner drink.

Mulls:- A sweetened and spiced heated liquor, wine or beer, served as a hot punch.

Neat:- The consumption of a spirit as a straight, unaccompanied shot.

Negus:- A punch-like combination containing a wine, such as port, heated with spices and sweetened.

Nip:- A quarter of a bottle.

Nightcap:- A wine or liquor taken before bedtime.

On The Rocks:- A wine or liquor poured over ice cubes.

Pick-Me-Up:- A drink designed to relieve the effects of overindulgence in alcohol.

Posset:- An old British drink from which the eggnog was derived. It consists of a mixture of heated ale or wine curdled with milk, eggs, and spices.

Puff:- A traditional afternoon drink made of equal parts spirit and milk, topped with club soda and served over ice.

Punch:- A party-size beverage consisting of fruit, fruit juices, flavorings and sweeteners, soft drinks, and a wine or liquor base.

Rickey:- A drink made a liquor, usually gin, a half lime and soda water. It is sometimes sweetened, and often served with ice in a rickey glass.

Sangaree:- A tall chilled and sweetened wine/liquor garnished with nutmeg.

Shooter:- A straight shot of whiskey or other kind of spirit taken neat.

Shrub:- Spirits, fruit juices, and sugar, aged in a sealed container such as a cask or crock, then usually bottled.

Sling:- A tall drink made with either brandy, whiskey or gin, with lemon juice, sugar and soda water. It is served both hot and cold.

Smash:- A short julep made of liquor, sugar, and mint, served in a small glass.

Sour:- A short drink consisting of liquor, lemon/lime juice and sugar.

Supercall:- Also known as top shelf or super premium. The high octane, often higher proof alcohols, or super-aged or flavored versions.

Swizzle:- A tall, traditionally rum-based cocktail filled with cracked ice. A stirring rod or swizzle stick is quickly rotated between the palm of the hands to form frost on the glass.

Syllabub:- A beverage made from a mixture of sweetened milk/cream, wine and spices.

Toddy:- A sweetened drink of liquor and hot water, often with spices and served in a tall glass.

Tot:- A small amount of liquor.

Virgin:- A non-alcoholic drink.

Well Drink:- A liquor and mixer, of which neither are defined brands. (ie. Gin and Tonic, Rum and Coke)

9.8 The Mixing Methods

The art of mixing drinks or Mixology, as it is called, is an art or skill of mixing alcoholic drinks. This requires knowledge of alcoholic beverages, skill or art of mixing beverages. The Bartender must know the drink by name, ingredients, mixing methods, correct glassware to serve the beverage, garnishes and serving temperature. Mixology involves good understanding of Structure of drink, essential ingredients of a good drink and basic methods of mixing drinks.

Mixology does not involve making too large a drink but single, individual drinks made to order. Mixed drink is any drink in which one alcoholic beverage is mixed with another or with one or more non alcoholic beverage.

Structure of Mixed drinks

Certain characteristics are common to all mixed drinks. One of these is the structure typical of all drinks. Each drink has a Base- the major or main alcoholic Ingredient- which gives the character to the mixed drink and the flavor. Complimentary ingredient- (Or Modifiers) Alcoholic or Nonalcoholic, which adds or modifies the flavor or the character. For e.g. Sweet vermouth in Manhattan. These may give a different personality to the drink even with the same base. When modifiers are alcoholic ingredients, they art) almost certainly use lesser quantity than the base spirit. Accent Ingredient brings about distinct color and flavor modification. For e.g. Angostura Bitter. These are used in very small quantities, usually few drops. Garnish, the fourth Ingredient, is considered as "dressing up" the prepared drink. Most of the drinks have, standard garnishes and change in garnish may alter the name of the drink. All mixed drinks may not have a standard garnish.

9.8.1 Components of Mixed Drinks

A) Alcoholic Beverage

Alcoholic beverages can be served straight (also called neat), meaning there is only one ingredient (a particular type of alcohol), or mixed. Most mixed drinks include other ingredients, or mixers, besides the alcohol or blend of alcohols. Common mixers include carbonated beverages. sweeteners, bitters, flavorings, colorings, sauces, and salt. Ice is an important ingredient in many mixed drinks, whether the drink is poured over the ice or the ice is blended as part of the beverage. Mixed drinks also include non-alcoholic, or "virgin", cocktails, which are generally made in the same manner, but leaving out the alcohol. Commonly found alcoholic beverages inihe bar are:

- Bourbon - Kentucky whiskey
- Gin - Distilled spirit flavored with juniper berries and other botanicals
- Rum, Dark - flavorful distilled spirit from sugar cane
- Rum, White - lightly flavored distilled spirit from sugar cane
- Scotch - Scottish whisky, more smoky than other whisky.
- Tequila - flavorful distilled Mexican spirit from the agave pla:nt
- Triple Sec or Cointreau - orange-flavored liqueurs
- Vermouth, pry - a common aromatized mixer wine

- Vermouth, Sweet - a common aromatized mixer wine
- Vodka - clear, nearly flavorless distilled spirit
- Wine, White - .more delicately flavored than red wine

After stocking abarwith1he basics, some other ingredients are also necessary to help expand the variety and diversity of the drinks bartender can provide to valued patrons. Some of these ingredients are:

- Beer, Lager
- Flavored Spirits/Liquors- the more flavors, the wider range of cocktails you can serve
- High-Proof Spirits - any spirit or liquor with a high alcohol content (e.g., Bacardi 151 or Everclear)
- Kahlua- coffee flavored liqueurs
- Local Variants and Locally Distilled Alcohols - regional differences highlight different alcohols (e.g., sake, pisco, ouzo)
- Pre-mixed Mixers - the ingredients .for several popular mixed drinks (martinis, margaritas, mudslides, etc,) ~re available pre-mixed; all you do is add the alcohol
- Schnapps -peach and peppermint are common flavors
- Whiskey, Rye -Tennessee whiskey
- Wine, Red- more robustly flavored than white wine

B) Mixers

These are non-alcoholic ingredients in cocktails. Mixers include things like grenadine, soda, non-liqueur syrups, and juices.

Carbonated mixers are based on carbonated water. Due to certain properties of gas-liquid solutions and gas solubility, carbonated water does not stay carbonated for long; it quickly goes flat. Because heat decreases solubility of gases, and because an open container allows the pressure on top the solution to staybe1ow the vapor pressure of carbon dioxide, carbonated mixers are kept in a keg or cold, closed bottle.

For soda fountains and soda guns, carbonated water is mixed for soda, colas, and tonic water by passing water through syrup and introducing carbon dioxide gas into the line from a pressurized tank, This 'ensures that the carbonation is always fresh, not weak or flat. Kegs usually come with a pump to allow them to be pressurized, Remember, gases evaporate froin water under low pressure; high pressure fixes this. Club Soda, Coke, Tonic water and White Soda are few commonly used Carbonated mixers,

Juices should be preferably freshly squeezed, Whenever possible, use fresh squeezed citrus juices, These juices degrade quickly after being squeezed, and cocktails will not have the expeaed flavour or balance with sweet arid sour mix or commercial bottled juices'. For less easily made juices such as pomegranate or pineapple, the drink recipe is likely balanced for bottled juice, so I feel free to use those, as long as they are 100%, juice without added sweeteners or artificial flavourings. Cranberry juice, Grapefruit juice, Orange juice. Pineapple juice, Lemon juice and Lime juices are a must in making drinks.

Lime juice is one of the most common juices found in classic cocktails, as its tart flavour is very effective at balancing sweet liqueurs like TripleSec, and its character has a natural synergy with the aromatic botanicals of dry gin. 1f used in a cocktail without a sweeter liqueur or juice, it is often sweetened with a smaU amount of simple syrup so as not to be unpleasantly tart. Lime juice is also a bit inconsistent compared to other citrus juices, so one must be sure to taste a cocktail and balance for it before serving.

Rose's lime juice

Rose's is a lime juice cordial, with sugar and preservatives added. It is a very specific flavour, which is often specified in Gimlet recipes. However, given the current availability of fresh limes in most parts of the developed world, it should never be substituted in recipes calling for "lime juice", only those calling for lime juice cordial or Rose's specifically.

Syrups

- Grenadine
- Peach nectar
- Simple

Bitters

- Angostura bitters
- Orange bitters
- Campari

Other Ingredients without which many drinks would loose their popularity are Cream, Ice, Milk, Water, Egg White.

Garnishes include things like fruit wedges and onions.

Lemon slices

A good supply of .lemon slices is a must. Generally a slice of lemon is added to gin and tonics but can be requested for various other drinks.

Lemon twists

You should, cut up at 1east one peel for lemon twists at the beginning of each night. Generally you won't need many more than a peel's worth if that much. You should keep a few lemon wedges around as well, for the occasional lemony-fresh Patron.

Lime Wedges

Cut your wedges from a Persian lime, the most common type, not a key lime which is smaller and yellower. The reason for this is because while they are similar, two different flavors are produced. Always keep limes refrigerated to ensure the customer is getting the best quality lime. Also, cut the limes as you need them, not before hand. Unless you know you are going to need a lot, cutting them frest is a must.

Cherries, especially stemmed maraschino cherries, because they're easier to get out of the glass; some bar patrons may also enjoy tying the stems in knots inside their mouths. Do not get cherries soaked in rum or other alcohols; make sure your cherries are alcohol-free, as even small bits of alcohol can be extremely dangerous for drinkers with alcohol allergies. Keep a lot of cherries around.

Orange Flag

This is a cherry speared onto an orange slice. A number of mixed drinks use this garnish.

Olives should be are green; pitted; and without pimento, the little red thing that, is found in some olives. If Martinis are very popular at the bar, bartenders keep a lot of olives around, to keep a lot of customers around. Now it is common to have olives stuffed with' different cheeses, such as gorgonzola, bleu cheese, and provolone. Also jalapeno stuffed olives are gaining popularity in the southwest region of the United States.

Onions, Small cocktail onions, the size of marbles, are used for Gibsons. Not many people order Gibsons but bartenders keep propreitory Cocktail onions handy as it is also enjoyed with gin.

Orange slices are another popular garnish.

Mint Leaves are required to make certail1mixed drinks such as a Mojito and a Mint Julep. Mint leaves should be fresh, wrapped in a damp papertowel and refrigerated.

Ice has become more important recently in drinks. Different shapes and styles are de facto in the cutting edge mixologist's repertoire.

Styles:

Twice Frozen (or many times frozen) achieves a similar goal to heating before freezing. The air that is in solution with the water comes out of solution and allows the ice to freeze into a more dense, harder to melt block. This is useful for martinis and other drinks that are best served cold, but should not be watered down.

Mineral/Bottled Water can impart a different flavor in 1.he water. This is usually used in citrus/acidic drinks where the melted water can mellow the drink out.

Shapes:

A big block of ice allows pieces to be chipped off in the appropriate shapes and sizes. Spears can be cut to fit into the shaker for stirring a martini, or small globes canbe cut to fit into a tumbler.

Larger-than-usual cubes are useful to keep a rocks drink cold but not melt too much, this can help a scotch/rocks keep its flavor while imparting a minimal amount of water into the drink.

Measures and Conversions

Numeric

For garnishes and other pre-measured things.

- 1 cherry
- 2 lemon twists

Fluid

- 1/2measure Grenadine
- 4 measure Cream soda

1 measure = 1 fluid ounce American (29.6 ml) = 1 fluid ounce imperial (28.4 ml) =25 ml (O.9 fluid ounces)

Dash and fill

Some recipes call for a small amount or "dash" to taste, and others for a "fill" to a certain level of fullness. A dash can be loosely defined as 1 teaspoon = 1/6 measure, 1 dash = 1/10 teaspoon

- Dash Grenadine
- White soda to fill

Jigger

A jigger of fluid is 1.5 oz. (45 mL)

Count

In this context, a "count" is approximately ½ oz (15 ml). Afive conut, for example, would be 205 oz (75 mL).

Following are the technique of preparing some drink families:

Highballs are iced drinks Containing liquor and water or a carbonated mixer served in a tall glass. In practice, the term highball is used to refer to any drink prepared in a highball glass with ice. These drinks are prepared directly in a 9 oz (270 ml) highball glass.

Making a highball

To make a highball, following is recommended.

- Fill a highball glass two-thirds full with ice, Use an ice scoop or your hands; never use the glass. If the glass breaks in the ice, it. Will leave shards indistinguishable from ice. This makes it impossible to locate all of the shard; it is likely that small chips will be scattered through the ice as well as the big pieces. It may be illegal in your area to use anything but an ice scoop for this reason.
- Pour in one jigger (45 mL) of liquor. Note: some bars save money by putting in 1zo (30 mL) instead or a whole jigger (45mL).
- Pour mixer to the top.
- If the mixer is non-carbonated, stir it; or stick a straw in it 'and let the drinker stir. If it's carbonated, the bubbles do the stirring for it.
- Garnish, if necessary.

Stirred cocktails ate drinks such as Martinis, Manhattans, and Gimlets. They are stronger-than highballs and typically are 4 oz. (120mL) of liquid.

Stirred cocktails can be served straight up, without ice; or on the rocks, with ice. In either case, the drink is mixed with ice and then strained; drinks on the rocks are strained into a glass with fresh ice. Stirred cocktails .should be strained into a glass with a stem so that they keep cold longer, especially when served straight-up; a cocktail glass is exactly this.

Making a stirred cocktail

To prepare a stirred, follow the below directions.

- Fill a 12 oz. (350 mL) shaker glass two-thirds full with ice.
- Add ingredients from smallest to largest amount, so that if you pour in too much you don't have to discard a whole drink.
- Stir very well.
- Strain the drink into a serving glass. For drinks on the rocks, strain into a glass with fresh ice; for drinks straight up, strain into an empty glass.
- Garnish as necessary.

You can add the smallest ingredient before the ice; this is recommended for drinks such as Martinis, where you have to add a very small amount of dry vermouth.

Stirred cocktails can also be prepared as shaken cocktails in many cases; this may mix the drink better, but it may also make it cloudy.. Shaking can also chip or break up the ice, increasing the water content of a drink. Stirred drinks should be stirred unless the patron requests it be shaken. As a rule of thumb, drinks made entirely of clear ingredients should be stirred, while drinks containing other ingredients such as fruit juice or egg white should be shaken.

Shaken cocktails are similar to stirred cocktails, but have the obvious difference of using a shaking motion to combine the ingredients. Drink components are poured over ice into either a .cocktail shaker or a Boston Shaker. The vessel is covered, vigorously shaken, and the resulting mixture "is strained into a glass of appropriate size and shape. When preparing cocktails that contain syrups, fruit juices, or dairy (including eggs), shaking is generally preferred over stirring, as the violent action will better combine these ingredients.

How to Shake A Cocktail?

Many cocktail recipes call for the ingredients to be shaken using a cocktail shaker. Of all the cocktail preparations, shaking is by far the most enjoyable and entertaining for you and your guests. Shaking is a simple technique that, with a little practice and by following a few tips, you'll master in no time. Once you get your personal shaking style down your cocktails will emerge crisp, cool and concentrated.

To shake a drink, following must be remembered.

Place ice cubes in the shaker first. This will chill the shaker and cool the liquids as you add them.

Use 5-6 ice cubes for one drink.

When making two drinks at once use less ice to make room in the shaker.

Don't overfill the shaker. Give the ingredients plenty of room to move around.

Shake most drinks vigorously to a slow count of ten.

Shake drinks longer and harder that have many ingredients or ingredients that don't mix well such as eggs or cream.

Shake toa rhythm. Hum a tune and shake to the beat.

Shake frozen or blended drinks like daiquiris and coladas with crushed ice.

Don't add fruit to the shaker. Instead add it to the glass after straining.

Some drinkers will prefer to order a cocktail that is shaken regardless of the ingredients, the assumption being that this will result in a smoother, colder beverage. James Bond popularized the idea of a shaken cocktail on screen when he ordered a "Martini. Shaken, not stirred." Some

drinkers believe that shaking cocktails will "bruise" the ingredients, meaning the liquor will be overly diluted, resulting in a flat, watery taste.

Frozen drinks, freezes, or blended drinks all refer to drinks made by blending ice, liqueurs, and mixers. Smoothies are popular in many parts of the United States now, and in much the same fashion involve blending ice, juice, and fruit.

Almost any of these can be made virgin by simply removing the alcohol; it is recommended to blend the drinks virgin and pour into a glass with the alcohol waiting. This allows a single, large blender, to be made full of the drink and served to minors and other non-drinkers as well as legal drinkers; and also allows you to avoid washing the blender if you're hammering out, say, 4 Pina Coladas far spme kids, 1 for the designated driver, and 2 for a couple teachers needing a good nerve relaxant.

Making a blended drink

Follow the below instructions when mixing a freeze. Remember to use a heavy-duty blender capable of continuously crunching through ice; most residential-quality blenders will quickly dull, wear, or break if given the task of constantly chopping ice cubes into bits and pieces. If you're going for simple preparation at home, make sure the blender you buy can handle ice; if you want to hold parties or open a bar as a small business, get a heavier duty one that can stand the workload.

- Make sure the blender is off.
- Stack the blender a quarter full of ice.
- Begin adding the mixers until the ice just begins to float.
- Put the lid' on. If you're wondering what will happen if you don't, then leave the lid off.
- Make sure no hair, fingers, or clothing are trapped in the blender or anywhere they can get caught up in.
- Hold the lid down with one hand.
- Start the blender at low speed.
- After a few seconds, switch to high speed until the ingredients are well blended.
- Pour the mixed drink into the glass, over whatever alcohol is being added.

9.9 Summary

The cocktail is becoming a very popular drink and spreading across the society and globe. Cocktails have fascinating history and gives opportunity for creativity and style. Cocktails have various methods and each individual can create his own style. The glassware also has impact on

the style and presentation of the cocktails. The mixing of ingredients also have deep impact on the taste of the cocktail and as a bar tender it is important the we are able to practice and master the art completely.

9.10 Review Questions

Q.1. Discuss the history of Cocktails.

Q.2. Give two examples of cocktails based on Rum, Wiskey and Tequila.

Q.3. List various types of glasswares used on cocktails.

Q.4. Discuss various precautions in making the cocktails.

Q.5. Explain various terminologies used in cocktail making.

9.11 Suggested Reading

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UNIT 10

BAR MANAGEMENT

Structure

10.0 Objectives

- Student know how to maintain Bar Stock,
- Student know about Bar control
- Student know about Bar staffing
- Student know about Beverage control
- Student know about Purchasing Control
- Student know about Receiving Control
- Student know about Storing Control
- Student know about Bar Thefts and Frauds

10.1 Introduction

A **bar** is a retail business establishment that serves alcoholic drinks — beer, wine, liquor, and cocktails — for consumption on the premises.

Bars provide stools or chairs that are placed at tables or counters for their patrons. Some bars have entertainment on a stage, such as a live band, comedians, go-go dancers, or strippers. Bars which offer entertainment or live music are often referred to as music bars or nightclubs.

Types of bars range from dive bars to elegant places of entertainment for the elite.

Many bars have a happy hour to encourage off-peak patronage. Bars that fill to capacity sometimes implement acover charge or a minimum purchase requirement during their peak hours. Such bars often feature entertainment, which may be a live band or a disc jockey playing recorded music.

The term "bar" is derived from the specialized counter on which drinks are served. Patrons may sit or stand at the bar and be served by the bartender, or they may sit at tables and be served by cocktail servers. The "back bar" is a set of shelves of glasses and bottles behind that counter. In some establishments, the back bar is elaborately decorated with wood work, etched glass, mirrors, and lights.

The bar and beverage sector worldwide has undergone considerable change in recent years as consumer expectations have changed. A pub visit can be now all about having that one special night out, once a week or twice a month, in which the bar owner and their staff members are required to provide an integrated social experience. This experience must contain the tangible elements of the products, for example food, drinks, entertainment, and the intangible elements such as the service, atmosphere, mood and value for money. Consumers are more widely travelled now and are more aware of international foods, flavors and styles of preparation and service. Customers expect the latest hot and cold beverages to be offered and served in a professional and engaging fashion. Pubs are driving business through involvement activities which include cocktail making or cooking classes, where customers can prepare their own tasty cocktails and snacks under supervision, plus tutored wine, distilled sprits and beer tasting sessions, carried out by staff members or guest presenters who are knowledgeable, efficient and friendly. The economic, social and technological environments in which bars function has also changed to meet these challenges. Bars are adopting marketing techniques and technology to understand the competition and to target consumers in promoting their products and services. Recent legislative changes at national and international levels, and the subsequent high costs of accidents (including costs relating to litigation and compensation) have placed serious legal implications on bar owners and on their staff members to be aware of their responsibilities in relation to food safety, the responsible service of alcohol and security. Poor standards in these areas place customers and staff at risk of serious injury if not death. Bar owners must ensure, if necessary by enforcement, that all their staff members follow proper safety and security standards. viii The Principles and Practice of Bar and Beverage Management The traditional image of the bar as an owner-managed pub premises is changing, the sector now also incorporates bars within hotels, restaurants, micro breweries, night clubs, leisure, theatre and transport complexes. Owners and managers must now operate more effectively with flexible work practices to manage their diverse workforces and operational systems for business success.

10.2 Bar Stock

Bar stock, also colloquially known as **billet**, is a common form of raw purified metal, used by industry to manufacture metal parts and products. Most metal produced by a steel mill or aluminium plant is formed (via rolling or extrusion) into long continuous strips of various size

and shape. These strips are cut at regular intervals and allowed to cool, each segment becoming a piece of bar stock. A good analogy is pasta-making, in which lumps of dough are extruded into various cross-sectional shapes; cut into lengths; and then dried in that form. The cross-sectional shapes of pasta vary from simple bar or tube shapes (such as linguine or penne) to more elaborate extrusions (such asrotelle, fiori, or rotini). The same is true of metal bar stock. The most common shapes are **round bar** (also called **rod**),**rectangular bar** (including **square bar**, the special case of equal sides), and hexagonal bar (usually called **hex bar** for short). Tube and pipe are similar, but have hollow centers and are traditionally not called "bar" in industrial usage. (However, a product called hollow bar, essentially tube but with custom-orderable OD and ID and thus custom wall thickness, is marketed for lathe bar work which can benefit from obviation of drilling and rough boring.) Also similar in concept, but not called "bar", are the common structural shapes such as angle stock and channel stock. These are commonly available in steel and aluminum; the names "angle iron" and "channel iron" are still commonly used (informally) even though their literal namesake, wrought iron, has been replaced by steel and aluminum for most uses.

A machine shop typically has a storage area containing a large variety of bar stock. To create a metal component, a bar of sufficient volume is selected from storage and brought to the machining area. This piece may then be sawed, milled, drilled, turned, or ground to remove material and create the final shape. In turning, for large-diameter work (typically more than 100 millimetres (3.9 in), although there is no universal threshold), a piece of the bar is cut off using a horizontal bandsaw to create a *blank* for each part. The blanks are then fed into a chucking lathe (chucker) which chucks each one in turn. For smaller-diameter work, the entire length of bar stock is more often fed through the spindle of the lathe. The entire bar rotates with the spindle during the part-machining cycle. When the cycle ends and one part is done, the chuck opens, the bar is pulled or pushed forward ("fed") by any of various automatic means, the chuck closes, and the next cycle begins. The last step of the cycle is to cut off the machined part from the bar, which is called "parting it off" and is achieved with a "cutoff" or "part-off" tool, a tool bit that grooves the bar all the way down to the centreline, causing the part to fall off. Then the cycle repeats.

The not-yet-cut bar protruding from the back of the spindle, rotating quickly, can present a safety hazard if it is sticking out too far and unconstrained from bending. Thus sometimes long bars must be sawn into shorter bars before being fed as "bar work" (which is the term for such work).

CNC lathes and screw machines have accessories called "bar feeders", which hold, guide, and feed the bar as commanded by the CNC control. More advanced machines may have a "bar loader" which holds multiple bars and feeds them one at a time into the bar feeder. Bar loaders are like magazines for part blanks (or pallets for milling work) in that they allow lights-out machining. The bar loader is filled with bars (or the magazine or pallet with part blanks) during working hours, and then it runs during the night unattended. Given that there is no human around to detect if something went wrong and the machine should stop, there are various kinds of

sensors that are used to detect this, such as load meters, infrared beams, and, in recent years, webcams, which are placed inside the machine tool's enclosure and allow remote viewing of the cutting action.

10.3 Bar control

There are many benefits for having specific procedures for the control and recording of stock and beverages in your bar premises. Operating a regular and rigorous system of stock taking and beverage control within your bar will help you to;

- control costs,
- achieve profit margins acceptable for the success of the business
- help you to identify problem areas in relation all the products, stocks, beverages etc of your bar business.

10.4 Bar staffing

The type of interaction your staff has with your customers - whether good or bad - determines in large part whether your customers become loyal customers and continue to patronize your business again and again.

Just as important, **if you ever want to be able to "get away"** from the business for a few days or longer, you need staff that is competent and well trained.

Hiring and retaining quality employees is not as easy as it used to be. Bar owners need every advantage they can get in attracting and keeping those staff members that make their business run.

We'll cover in this section how to attract quality people, how to train and motivate them, and include **training manuals, a comprehensive employee handbook, and a wide range of employee forms** that you can use to put straightforward systems into place to make managing your bartenders, servers, and other staff members much easier.

We'll also give you proven techniques for achieving and maintaining proper staffing levels and tracking (and increasing) employee productivity through motivation methods that get results.

10.5 Beverage control

- In the bar industry it’s crucial to adopt control systems and techniques which help to establish standard procedures for the preparation, size and production method for all your food and beverages.
- If your bar can keep control in this area you have a significant opportunity to maximise your profits on all products
  Systems and techniques for creating controls in this area

- Setting a standard drink size for beers, spirits and wines
- Adopting standard food and cocktail recipes
- Standard glassware, crockery
- Free pour
- Hand held measures, jiggers and optics

10.6 Purchasing Control

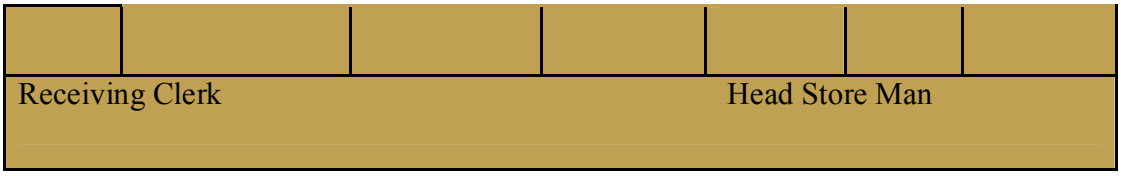
Keeping in view the high value of alcoholic beverages procured, received, transferred to stores / cellars and then finally issued to bars against requisition is done more carefully then food items.

1. Cellar Inwards Book:

All alcoholic beverages received are recorded in the book called, 'Cellar Inwards Book'. From the cellars inwards book, the receipts are recorded to the bin cards and stock ledger.

Cellar Inwards Book

Date …….						
Date	Items	Invoice / Delivery No	Bin No.	Size	Bottles	Remarks



2. Bin Cards / Stock Cards:

These cards are quite similar to bin cards used for food stores.

3. Cellar Control:

All beverages received (from receiving department) and issued to bars against requisitions are entered in the register called daily issues register. This information is also recorded in the bin cards / stock cards for cross check. The bottles are issued to the bars, kitchen against requisition slips. All issues are priced at either the purchase price or at any other price fixed by the management (for details of pricing please refer to the notes of pricing of non-perishable items).

4. Inventory:

The inventory of cellars / stores as well as all bars must be taken very regularly and if possible on daily basis. Physically all bottles, cans, etc, should be checked and counted. The open bottles in the bars should be measured to know the exact quantity of drinks in the bar for control purposes.

5. Empty Bottles:

Usually hotel pays security for empty bottles, racks, crates, etc to the suppliers. A strict control on the movement of these is kept. Stores issue fresh bottles, crates against the empty bottles, crates, etc. While taking inventory of bars / stores the control department also checks the empty bottles, racks, crates, etc.

6. Breakages:

If breakage is due to negligence in transferring / handling then it is charged to the responsible person. In case if the breakage is due to the beyond human control then the bottle broken is written off. The control department takes along with them the sealed bottles neck as a proof. In case a lose bottle is broken then the bar man is charged for the same.

7. Corky Wines:

Corky wines are also termed as Ullage. Due to bad storing or due to fault in cork air is able to find its way to the wine bottle. This air makes the wine corky. Corky means the wine is not suitable for consumption due to change in its taste. The corky wines are cancelled and shown in the breakage / spoilage records by the control department.

8. Level of Stock:

The level of stock should depend upon the size of cellar, working capital available, future price of the beverages, management policy, and time taken by the suppliers to supply the products. The location and size of the hotel also has an impact on the level of stock of beverages.

10.7 Receiving Control

It does little good to make smart purchasing decisions unless there is follow-through at the time of product receiving. It is necessary to ensure that products that are ordered are, in fact, received. Most suppliers are ethical, but they are all human. Human error can cause extensive and costly loses to beverage operations that do not consistently and effectively check to ensure that there are no problems at the time beverages are delivered. To properly prepare for receiving beverages, managers take specific actions:

- Provide adequate space for receiving.
- Provide needed receiving equipment such as carts and dollies.
- Establish allowable delivery periods and communicate these to vendors.
- Identify and train receiving personnel.
- Develop a records system for recording the acceptance of delivered products.

The list of issues that can occur when products are received is seemingly endless. It is important for the beverage manager to first design a receiving system that incorporates basic control principles, and second to consistently ensure that these procedures are practiced.

Checking Against Purchase Orders

To properly oversee beverage product deliveries the beverage manager, or those who are responsible for product receiving, must know the specifics of each order. This becomes easier when written purchase orders, not verbal phone orders, are in use. Written purchase orders can then be checked to ensure that the products being received meet the specifics of the purchase order. A copy of the purchase order or purchase record that was agreed on at the time of purchasing should be available in the receiving area. Personnel with receiving responsibilities will then know what to expect, including the following:

- Which supplier will be delivering?
- What day is the delivery expected?
- What products are coming in?
- In what volume or quantity will they arrive?
- What is the size of the purchase unit?
- What is the agreed-on price?
- What quality is expected?

By checking the quantity and quality of products delivered against purchase orders, receiving personnel can ensure that they do not accept items that were not ordered or are in damaged condition. They also must not sign delivery invoices if only partial or no delivery of expected items occurs. Finally, they must accept only items of proper brand and quality.

Checking Against Delivery Invoices

The delivery invoice provided by the vendor becomes important after products have been checked against written purchase orders .The delivery invoice will be the basis on which payment claims from the supplier will be made. It is critical that all items on the delivery invoice are received in the correct quantity and at the correct prices. If there are no problems with the delivery invoice, it can be signed. One copy must be routed by the receiver to the appropriate beverage or other manager for later verification with other information at times of payment processing. If there are rejections of products or variations between ordered and delivered items that should result in corrections or alternations to the invoice, a written record of that fact must be made. For example, if items on the invoice are not delivered in the correct quantity or quality, a note should be included on the invoice.

Accepting Products

After the previous steps have been carefully and correctly completed, the delivery invoice should be signed to note acceptance of the product. Typically, beverage products become the property of the beverage operation at this point. Sometimes delivery personnel exert pressure on receiving staff to speed up the receiving process. It does take time to count and complete proper product inspection. However, receiving staff must invest the time necessary to do their jobs well. It is for this reason that managers often state that no deliveries are to be made during specified time periods. If, for example, all employees are busy during lunch, they will not have time to correctly complete the receiving process and so no deliveries should be accepted then.

Moving to Storage Area(s)

After completing the receiving process, staff should move products to the proper storage area(s). At this stage, managers should enforce several important storage principles:

• Movement of product to inventory areas should be undertaken by beverage employees, not by delivery personnel. There is an increased chance of theft when nonbeverage delivery staff members are allowed into beverage storage areas containing large quantities of expensive and theft-prone products.

• Prompt removal to storage areas reduces the chance for theft when products are left in unprotected delivery areas.

• Spoilage becomes less of an issue when products are moved from delivery areas to storage areas maintained at the correct storage temperatures.

Completing Receiving Tasks and Records

Large operations may use a special receiving report to provide a record of products received. They may also create a record of product transfers from receiving to storage areas if different staff members perform these tasks. When products are placed in storage, many managers require staff to mark the date of delivery on the incoming products. They also must require that products be rotated. Rotation is the process used to ensure the use of the oldest products first by placing all incoming products behind or under those items already in inventory. If a perpetual inventory system is in use, these records are updated at the time products are placed in storage. Finally, receiving records can, with invoices attached, be used as an authorizing source for payment of the products that have been received. These records, including the signed delivery invoice, should be submitted to the appropriate person for payment immediately or on at least a daily basis. Managers should minimize opportunities for employee and supplier theft when receiving and placing products into storage. The complete receiving system should be designed for security. To help guard against theft, experienced managers incorporate several key strategies into the receiving process:

• The person responsible for purchasing should not also do the receiving, unless the owner or manager performs both of those duties.
• Selected staff members should be trained to receive and should always perform this task.
• Product delivery should be made at non busy times so that receiving personnel have the opportunity to complete all required tasks.
• Deliveries should be made to a specified area of the beverage operation.
• Products should be immediately moved to storage after the receiving process is complete.
• Non beverage personnel should not be allowed in back-of-house areas including storage spaces.
• The outside door to storage areas should be kept locked when not in use

10.8 Storing Control

The frequency of beverage deliveries depends upon the location and type of the hotel and the size of its storage facilities. The storage facilities at cellars and bars are to be carefully analysed. The cellars / beverage store rooms should be closer to the receiving department. While transferring of beverages from receiving department to stores and from stores to bars must be done carefully so that the pilferage of bottles may not take place.

As far as possible the cellar should be divided into four parts:

Red Wines and Spirits:

Red wines and spirits should be stored at 55 degree Fahrenheit / 13 degree Centigrade. This part of the store rooms should be dry and draught free.

White Wine and Sparkling Wines:

White wines and sparkling wines should be stored at a cooler place and the temperature of this area should be 50 degree Fahrenheit / 10 degree Centigrade.

Beers and Soft Drinks:

Beers and soft drinks should be stored at 55 degree Fahrenheit / 13 degree Centigrade.

Empty Bottles:

For storing empty bottles and crates a separate exclusive space should be marked and this area should not have an easy access by the staff for control purposes.

The wines should be stored in tilting form so that the corks remain moist at all times. This prevents corks becoming dry and that makes the wines corky.

10.9 Issuing Control

Storing and Issuing of Items:

The storage facilities, space, availability of working capital, management policy, future rates of commodities, shelf life, time taken in delivering the goods by suppliers etc. are the main factors which determine whether supplies will be delivered on daily basis, weekly basis or on monthly or seasonal basis. The perishable items may be purchased more frequently as compare to non perishable items.

A large hotel would have separate cold rooms to store different items at different temperatures. The perishable and frozen items should be stored at the most appropriate temperature and environment so that the freshness of the products remains intact. The smaller hotels may have freezers and deep freezers instead of cold rooms depending upon the space available and the quantity of stock stored.

The modern cold rooms and refrigerators have automatic defrosting facilities and the auto cut maintains certain temperature at all times. The cold rooms and refrigerators must be efficient so that power consumption is kept under check.

Different type of food stuffs are either send to different stores or in the different sections of the same store or to the kitchens directly. Perishable items are sending straight to kitchens but the non-perishable items are stored in the general store. Frozen stuff and some perishable items find their way to cold stores / refrigerators / deep freezers. The food items issued to kitchens against requisitions should be charged to the kitchen for the purpose of calculating food cost. In case a large quantity of raw material is issued to the kitchen and a major portion of remains unused then this will not show the correct food cost for the day. While issuing, the store received first is issued first (FIFO).

Stock Records:

Goods received are first recorded by receiving department in Goods Received Register. Once the stock is transferred to stores then it is recorded in Bin Cards and Stock Cards. Apart from

maintaining Bin Cards and Stock Cards the Stock taking is also done by the officials of accounts department, control department and food and beverage department at least once in a month. These all ensure that the control of stock is properly maintained and the inventory in physical form is comparable to the inventory as per Bin Cards. For calculating the stock cost, the management normally calculates the stock value either at procurement (Purchase cost + Carriage Inwards + Commission, etc.) or the current price which ever is higher.

Stores Issues:

The goods received in stores are kept at proper place so that they can be counted / weighed without delay while issuing to the departments against requisitions. It is saying that to have an efficient store there should be place for every commodity and every commodity should be at proper place. The stores received first are issue before (FIFO). While opening boxes the cans and bottles should be checked. If any can is damaged should not be accepted. The swelled cans usually contain contaminated food and due to the gas the cans swell. The cracked bottles should not be accepted and these rejected items should be sending back to the suppliers.

Pricing of Commodities:

All food items issued to departments should be fairly charged for calculating food cost. Food cost is a very vital tool of evaluating kitchens efficiency and management gives a lot of importance to the food cost.

The method of pricing the food issued depends on the type of commodity. The commodities can be broadly divided into Perishables and Non-Perishables,

Perishables:

Almost all perishable commodities directly go to the kitchen and are priced at actual purchase price. The perishables which first go to the stores and then issued on daily basis to the kitchens against requisitions then are prices differently (for details refer to Non-Perishable Pricing). The biggest problem of calculating cost is of meat and meat products. The animal carcass is issued to butcher against requisition. Butchery makes the appropriate portion sizes for different kitchen and different menu items as per the kitchens requirements. The butchery transfers the food to kitchens against transfer notes. The food items mentioned on the transfer notes and transferred from butchery are priced. While calculating the price of meat products the butchery keeps in mind the wastage and the actual yield is priced for control and costing purpose.

Non-Perishable:

In case of Non-Perishable items there are several different methods to price the items / commodities. But only one of the methods is adopted to price the commodities.

The following are the different methods for pricing Non-Perishables:

1. Procurement Price / Purchase Price:

The Procurement price of an item may or may not be same as purchase price. In case goods are purchased through agent or the supplier is quoting price ex show room / store then the hotel is required to pay the commission to the agent and carriage inward charges for transporting the goods to the hotel. For majority of the consumable items which is usually consumed with in a day or two of purchasing are usually charged on purchase price for calculating food cost.

2. Average Price:

In case the price of an item fluctuates very frequently and every time it is purchased the price may be different then the price paid, may be a day before. These items when issued to departments against requisitions are charged while calculating the average price paid for the item. This ensures more stability in the issue price of the commodities and hence does not affect adversely on the food cost.

3. Weighted Average Price:

The weighted average of the items is calculated to have more stability in issue price as compare to Average Price. For example if 100 packets of mushrooms are purchased at the price of Rs. 8 per packet and 400 packets of mushrooms are purchased at the price of Rs. 7. Then the Weighted Average Price will be 100 X 8 + 400 X 7 divided by 500 to know the price per packet. This will come to Rs. 800 + Rs. 2,800 = Rs. 3,600 divided by 500 = Rs. 7.20 per packet.

4. LIFO:

When the market fluctuates very frequently and the management wants to charge the latest price of the commodity even when the goods received first are issued first (FIFO). But in case latest price is less then the first price then the price paid for the commodities is charged to department issued stores.

5. FIFO:

This means the goods purchased first will be issued first and also the same price will be charged while issuing stores.

6. Higher Price:

The price debited to the departments while issuing stores is more then the price paid by the hotel for procuring the goods. This is done to cover the store and purchasing cost of the product.

7. Standard Price:

Irrespective of the price paid for procuring the commodities but the price charged is fixed by the management. Usually the management fixes the price of a commodity for a certain period say three to six months and the same price is charged to departments while issuing commodities against requisition. This helps in maintaining the food cost irrespective of the market price.

STORAGE OF BEVERAGES AND ITS ISSUING

The frequency of beverage deliveries depends upon the location and type of the hotel and the size of its storage facilities. The storage facilities at cellars and bars are to be carefully analysed. The cellars / beverage store rooms should be closer to the receiving department. While transferring of beverages from receiving department to stores and from stores to bars must be done carefully so that the pilferage of bottles may not take place.

As far as possible the cellar should be divided into four parts:

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Red wines and spirits should be stored at 55 degree Fahrenheit / 13 degree Centigrade. This part of the store rooms should be dry and draught free.

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Beers and soft drinks should be stored at 55 degree Fahrenheit / 13 degree Centigrade.

Empty Bottles:

For storing empty bottles and crates a separate exclusive space should be marked and this area should not have an easy access by the staff for control purposes.

The wines should be stored in tilting form so that the corks remain moist at all times. This prevents corks becoming dry and that makes the wines corky.

10.10Production Control

Production control is the activity of monitoring and controlling any particular production or operation. Production control is often run from a specific control room or operations room.

Production control is the activity of monitoring and controlling a large physical facility or physically dispersed service. It is a "set of actions and decision taken during production to egulate output and obtain reasonable assurance that the specification will be met."The American Production and Inventory Control Society, nowadays APICS, defined production control in 1959 as:

Production control is the task of predicting, planning and scheduling work, taking into account manpower, materials availability and other capacity restrictions, and cost so as to achieve proper quality and quantity at the time it is needed and then following up the schedule to see that the plan is carried out, using whatever systems have proven satisfactory for the purpose.

Production planning and control in larger factories is often run from a production planning department run by production controllers and a production control manager. Production monitoring and control of larger operations is often run from a central space, called a control room or operations room or operations control centre (OCC).

10.11 Bar Thefts and Frauds

Fraud is expensive. All businesses, large and small, run the risk of losing both revenue and reputation through fraud committed by people associated with the business. Fraud can be such a significant cost that it can threaten the very survival of a business. Many managers and business owners are unaware of the fraud risks inherent in their operations and fail to adequately monitor these risks. This often results in a significant amount of fraud going undetected and unreported. Theft and fraud control should form an integral part of your club's risk management strategy.All clubs must show that they have appropriate theft and fraud prevention systems in place by: Adopting a Theft and Fraud Prevention Policy; Identifying risk areas within club operations; and Implementing fraud prevention strategies to deter or minimize the opportunities for theft and fraud. This standard will assist clubs to develop and adopt policies, procedures and controls to prevent theft and fraud. These policies, procedures and controls should be incorporated into all aspects of the club's governance, management and operations, as well as being reviewed and reported on a regular basis to ensure they are working effectively.

10.12 Self Inspection Bar Rating Sheet

The saying "practice makes perfect" holds true with health inspections. The best way to prepare for an inspection is by performing a self-inspection every week. Here are some helpful tips to keep in mind while performing your self-inspection:

- **Make it unannounced.** Most of the time, routine inspections are unannounced, so pick a random day in the week to surprise your employees with an inspection. This will facilitate proper food handling practices day in and day out.
- **Have proper inspection tools.** Some of the common tools an inspector will carry are a , flashlight, clipboard, alcohol wipes, chemical test strips and inspection forms. Using these tools will assure that you are as accurate and true to the process as you can be.
- **Use the local inspection sheet.** Using the same sheet as your health inspector will allow you to know exactly what they are looking for and the severity of each violation. Most health inspectors will have extra forms and should be happy to provide you with some copies for your own inspections.
- **Start outside.** The first thing an inspector sees is the outside of your establishment, and exterior cleanliness is crucial as it offers the ever important first impression. Entering through the front door also allows you to better assume the role of a health inspector.

- **Get out the white glove.** Perhaps the best method to assure that your restaurant will pass an inspection is by being extremely thorough in your self-inspections. You will never find everything to be perfect, but striving for perfection will show your employees and inspector that you are serious about running a safe, healthy business.
- **Quiz employees.** During an inspection, the health official will often ask employees questions about the task they are currently performing. Asking workers task oriented and safety questions will keep the knowledge fresh in their minds and help gauge if your training techniques are effective.
- **Check the records.** Your inspector may ask for any temperature, employee illness, handwashing, training or HACCP records that you have to assure that you are properly monitoring safety practices. Taking time to check over these records yourself keeps them properly ordered and on hand for when the inspector arrives.
- **Point out good and bad behaviors.** Positive reinforcement is a proven teaching method and will help foster employee happiness and loyalty, so point out when an employee is doing something correctly. When an employee is performing a task incorrectly, take the time to explain the proper behavior.
- **Correct mistakes on the spot.** Let your workers know about any easy to fix violations to facilitate employee watchfulness.
- **Have a staff meeting afterwards.** Use this time to go over your inspection findings with employees. Again, point out both positive and negative habits. Spend some time explaining proper practices, so your employees understand why a certain action is required.

10.13Question

1. What is Bar Stock?
2. What is Bar control
3. What is Bar staffing
4. What is Beverage control
5. What is Purchasing Control
6. What is Receiving Control
7. What is Storing Control
8. What is Issuing Control
9. What is Production Control
10. What is Bar Thefts and Frauds
11. What is Self Inspection Bar Rating Sheet

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UNIT 11

CELLAR MANAGEMENT

Structure

11.1. Learning Objectives

By the end of the topic, students must be able to:

- To define Cellar and explain history associated with cellar.
- To explain location and layout of cellar.
- To enlist pointers for designing a cellar.

- To explain role of cellar in storing of alcoholic and non alcoholic beverages.
- To explain various cellar control techniques and formats used in cellar control.

11.2. Introduction

A wine cellar is a storage room for wine in bottles or barrels or more rarely in carboys, amphorae or plastic containers. In an active wine cellar, important factors such as temperature and humidity are maintained by a climate control system. In contrast, passive wine cellars are not climate- controlled, and are usually built underground to reduce temperature swings. An aboveground wine cellar is often called a wine room, while a small wine cellar (less than 500 bottles) is termed as Wine Closet.

11.3. Definition of Cellar:

According to the international Oxford Dictionary of English , ***a cellar is a room below ground level in a house that is often used for the storage of wine or coal, it may also refer to the stock of wine itself***. A cellar is intended to remain at a constant cool (not freezing) temperature all year round and usually has either a small window/opening or some form of air ventilation (air/draught bricks, etc.) in order to help eliminate damp or stale air. Cellars are more common in the UK in older houses, with most terraced housing built during late 19th, and early 20th century having cellars.

History of cellar

As we all know, wine has been around for a very long time! Archaeologists have found evidence of wine making in the Persian Gulf as early as 6000 BC. As wine then spread to Egypt, the Mediterranean and Europe, wine drinkers began to learn how wine changed over time. They soon found out those fluctuations in temperature, humidity and vibration can change the quality of wine. Also, the direct exposure to sunlight can ruin wine. As the wine tended to improve with aging, it made sense to store it in a quiet, dark place with consistent temperature. Hence, the concept of a “wine cellar” came about.

The earliest known cellar was found buried in the dirt beneath a 7000 year old Iranian kitchen. The Romans loved their wine and stored their wine barrels in subterranean cemeteries located beneath their cities. Later, the French began to dig specially designed caves to store their wines.

The practice of storing wine underground in Italy was immortalized in "The Cask of Amontillado " by Edgar Allen Poe. In this story, a murderer named Montresor lures his victim, Fortunato, a fellow nobleman who has insulted him, into Montresor’s underground wine cellar with the promise of tasting a rare Amontillado sherry. Eventually, Montresor chains Fortunato to the catacomb wall and places stones around his body, thereby entombing him – buried alive! We learn that Montresor has been doing this for years, leaving his victims to “rest in peace” among the crumbling corpses and wine barrels.

(a)

a.Wine bottles stored in a wine cellar

(b)

b. Solera cellar for storage of sherry

Purpose of a cellar: Wine cellars protect alcoholic beverages from potentially harmful external influences, providing darkness and a constant temperature. Wine is a natural, perishable food product. Left exposed to heat, light, vibration or fluctuations in temperature and humidity, all types of wine can spoil. When properly stored, wines not only maintain their quality but many actually improve in aroma, flavor, and complexity as they mature.

Conditions: Wine can be stored satisfactorily between 7–18 °C (45–64 °F) as long as any variations are gradual. A temperature of 13 °C (55 °F), much like that found in the caves used to store wine in France, is ideal for both short-term storage and long-term aging of wine. Note that wine generally matures differently and more slowly at a lower temperature than it does at a higher temperature. When the temperature swings are significant, 14 degrees or more, it will cause the wine to breathe through the cork which significantly speeds up the aging process. Between 10–14 °C (50–57 °F), wines will age normally.

Active versus passive Cellar

Wine cellars can be either active or passively cooled. Active wine cellars are highly insulated and need to be properly constructed. They require specialized wine cellar conditioning and cooling systems to maintain the desired temperature and humidity. In a very dry climate, it may be necessary to actively humidify the air, but in most areas this is not necessary. Passive wine cellars must be located in naturally cool and damp areas with minor seasonal and diurnal temperature variations—for example, a basement in a temperate climate. Passive cellars may be less predictable, but cost nothing to operate and are not affected by power outages

Storage of wine: Storage is an important consideration for wine that is being kept for long-term aging. While most wine is consumed within 24 hours of purchase, fine wines are often set aside for long-term storage. Wine is one of the few commodities that can improve with age but it can also rapidly deteriorate if kept in inadequate conditions. The three factors that have the most direct impact on a wine's condition are light, humidity, and temperature A fourth consideration

is security for expensive wines. Historically the storage of wine was handled by wine merchants but since the mid-20th century consumers have been increasingly storing their own wine in home-based wine cellars.

- Wines stored in a rack b. underground wine caves

11.4. Factors of Cellar Climate Control:

Following factors that have the most pronounced effect on wine in storage: light, humidity and temperature.

11.4.1. Light: Strong, direct sunlight or incandescent light can adversely react with phenolic compounds in wine and create potential wine faults. Delicate, light – bodied white wines run the greatest risk from light exposure and are often packaged in darkly tinted wine bottles that offer some protection from the light. Wines packaged in clear, light green and blue colored bottles are the most vulnerable to light and may need extra precautions for storage. Perfect conditions are not easily obtained naturally without going deep underground, however they can be achieved above ground with the correct preparation of a room and the use of modern refrigeration systems.

11.4.2. Humidity: In addition to temperature a humidity level of between 50% and 70% is also required to prevent the corks from drying out.Some degree of humidity is required in order to keep wines with cork enclosures from drying out. Even when wine bottles are stored on their sides, one side of the cork is still exposed to air. If the cork begins to dry out, it can allow oxygen to enter the bottle, filling the ullage space and possibly causing the wine to spoil or oxidize. Excessive humidity can also pose the risk of damaging wine labels, which may hinder identification or hurt potential resale value. Wine experts note that 75% humidity is often cited as ideal but there is very little significant research to definitively establish an optimal range.

Concern about humidity is one of the primary reasons why wine experts recommend that wine should not be kept in a refrigerator since the refrigeration process often includes dehumidifying, which can quickly dry out corks.
When a bottle is laying down keeping the cork moist, the humidity level is 100% inside the bottle. Levels of Humidity in the cellar above 80% would not damage the wine, but mould will start to form on labels and corks, therefore keeping the wine cellar just below that level is optimum.

11.4.3. Temperature: Wine is very susceptible to changes in temperature, with temperature control being an important consideration in wine storage. If the wine is exposed to too high a temperature (in excess of 77 °F (25 °C)) for long periods of time, it may become spoilt or "cooked" and develop off flavors. The exact length of time that a wine is at risk of exposure to high temperatures will vary depending on the wine, with some wines (such as Madeira which is exposed to high temperatures during its winemaking) being able to sustain exposure to high temperatures more easily than other, more delicate wines (such as Riesling). If the wine is exposed to temperatures that are too cold, the wine can freeze and expand, causing the cork to be pushed out; this will allow more oxygen to be exposed to the wine. Dramatic temperature swings (such as repeated transferring a wine from a warm room to a cool refrigerator) can also cause adverse chemical reactions in the wine that may lead to a variety of wine faults. Most experts recommend that wine be kept at constant temperatures between 50 and 59 °F (10 and 15 °C).

In general, a wine has a greater potential to develop complexity and a more aromatic bouquet if it is allowed to age slowly in a relatively cool environment. The lower the temperature, the more slowly a wine develops.On average, the rate of chemical reactions in wine doubles with each 18 °F (8 °C) increase in temperature. Wine expert recommends keeping wine intended for aging in a cool area with a constant temperature around 55 °F (13 °C). Wine can be stored at temperatures as high as 69 °F (21 °C) without long-term negative effect.

11.4.4. Vibration: Although anecdotal information regarding the contributions of vibration in wine storage states that it contributes to the accelerated aging of wine with adverse effects, therefore, to store red wines with limited changes in physico-chemical properties, vibrations should be minimized."

11.4.5. Orientation of the bottle: Most wine racks are designed to allow a wine to be stored on its side. The thinking behind this orientation is that the cork is more likely to stay moist and not dry out if it is kept in constant contact with the wine.

- Champagne is often recommended to be stored upright rather than lying on its side. This is because the internal pressure caused by the trapped carbonic gas provides enough humidity and protection from oxygen.
- Table wines are recommended to be stored lying on their side,

11.4.6. Places to store wine: Wine will prematurely develop if stored in an environment that has large temperature variations, particularly if these occur frequently. Temperature control systems ensure the wine cellar temperature is very stable. The variations cause corks to expand and contract which leads to oxidation of the wine**.**

If wine is stored in conditions that are too dry, the cork will shrink and cause leakage. Too moist, and mould and contamination may occur. Climate Controlled Wine Storage maintains moderate humidity levels (55%-75%) to avoid these problems and assist in the optimum wine development conditions.

11.5. Pointers for designing a cellar:

Some useful tips and guidelines that have evolved in the industry pertaining to the cellar facilities are as under:

- **Wall Framing**.
- **Electrical**
- **Vapor Barrier**
- **Insulation**
- **Wall Finish Materials**
- **Refrigeration units**
- **Cellar door and floor**

11.6. Organizing the cellar storage facility

In general, the physical arrangement of a cellar comprises the following:

- Main storage area held at (13-16 °C) for the storage of red wines and spirits and this area is also used for general collections and preparations of orders for the various bars.
- A refrigerated area held at (10 °C) for the storage of white wines and sparkling wines.
- Another refrigerated area held at (6- 8 °C) for the storage of keg beers only if necessary.
- An area held at (13 °C) for storage of bottle beers and soft drinks.
- A totally separated area for the stacking of empty bottles and crates etc.
- **Maintaining appropriate conditions** for temperature, humidity, and light mentioned above in the beverage storage facility to maximize shelf life of the stored beverages.
- **Maintaining Cellar Records** This is necessary for the purpose of beverage control.
- **Ensuring par stock of bars** Par stock is the precise quantity stated in numbers of bottles or other containers that must be on hand at all times for each beverages in the cellar.
- **Ideal location** This is necessary to provide direct and easy access to bars.
- **Maximum height of shelves** This should be 7’6” from floor level as it reduces the chances of breakages. Leave 4” space between the lower shelf and floor to facilitate cleaning and to keeps goods dry in case of flooding or spillage**.**

- **Ensuring safety and security of the beverage facility** Cellar should have one access and must be locked and sealed with a print on a tape with time of entry and code of key used to open the door and this includes assigning responsibility for the security of stored items to a single person and keeping the facility locked when required.

11.7. Cellar Control Techniques:

Receiving stock and beverages:

- The stock and equipment of the bar is expensive, mistakes reduce profits.
- Poor stock receiving systems encourage dishonesty.
- A comprehensive system for receiving stock and beverages can counteract these threats, should be adopted and actively operated at the point of delivery for the bar;
- This area should not be staffed by people with little or no specialized knowledge.
- All goods received have a monetary value and that it is essential to ensure that exactly this value in goods is properly accounted for and received.

Checking the stock and beverages and signing for deliveries

- Inspect the delivery dockets carefully
- Check the items listed on the delivery docket correspond with the items listed in the order book
- Inaccuracies must be communicated to the manager, owner
- Examine the stock for best before dates, breakages or missing seals
- Never sign any delivery dockets until you are fully sure that the order for delivery is intact and correct.

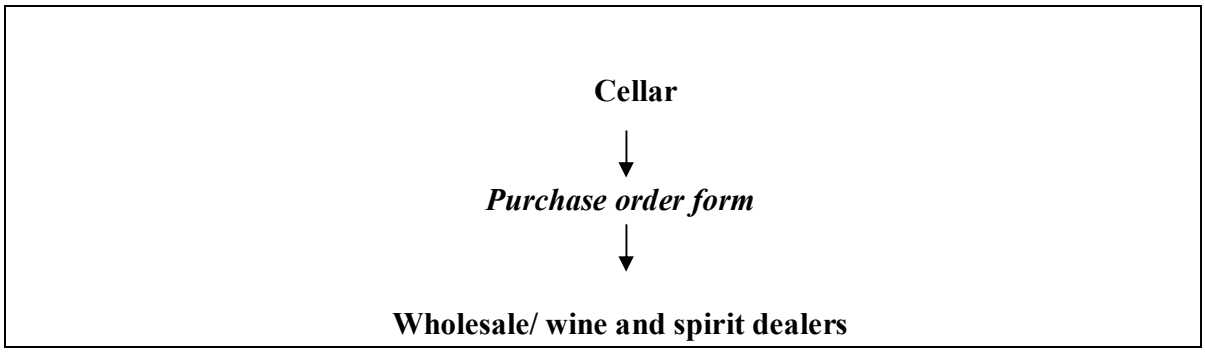
Storing of Beverages

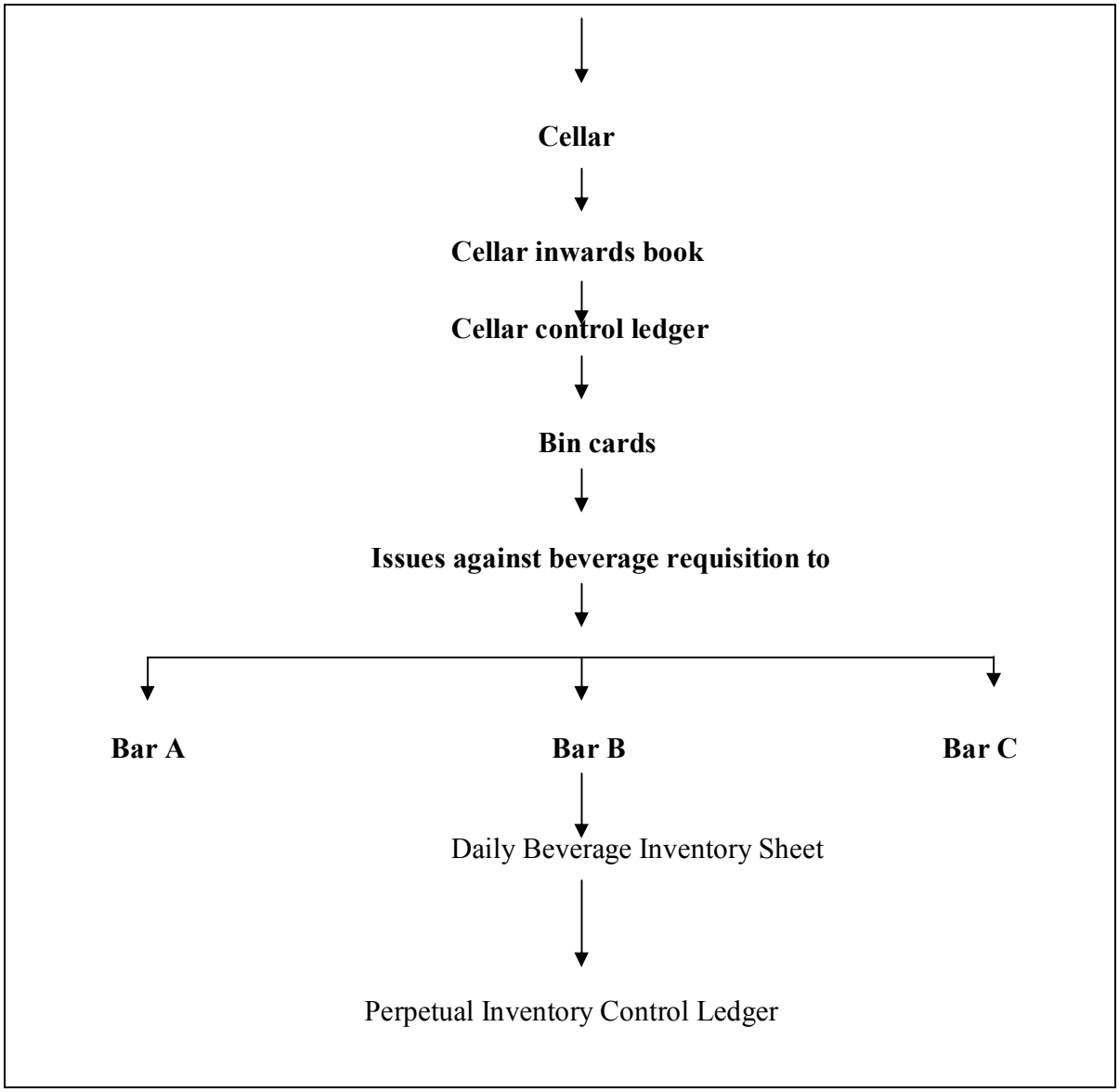
Storing involves keeping your food and beverage supplies until needed in a place that is secure against theft and deterioration.

Issuing of Food Stocks and Beverages

A requisition form from an authorized member of staff, for example, head chef, restaurant manager or from the storekeeper, informing the purchasing manager of low levels of items.

BASIC STEPS IN BAR AND CELLAR CONTROL (flow chart)





11.8. Cellar Records (Stock Records)

As the value of liquor purchase is high, the following cellar records are necessary to be maintained for proper cellar control:

1. Purchase Order Book
2. Cellar/ Goods Inwards Book
3. Cellar control sheet/ Ledger
4. Bin Cards
5. Goods Returned Book
6. Requisition Book
7. Daily Beverage Inventory Sheet

8. Cellar Perpetual Inventory Control Ledger
9. Empties Outward Book
10. Breakage Book.
11. Wine List
12. Wine Cellar Issues

11.8.1. Purchase Order Book

Hotel HM **Purchase Order**					
To,				Purchase order No.: _____ Date: _____ Requisition No.: _____ Department.: _____	
Ship to: _____		F.O.B.		**Via** _____	
Item	Description	Quantity	Unit	Price/ unit	Total cost
Total value of order:					
Terms & Conditions: ***1.*** ***2.*** ***3.*** ***4.***					
					Purchase Manager

Fig: Format of Purchase Order

11.8.2. Cellar/Goods Inwards Book

This is used to record all incoming beverages into the cellar. The information entered in the Cellar Inwards Book should cross check with Perpetual Inventory Control Ledger.

HM HOTEL

Cellar /Goods Inwards Book

Date:

Date	Beverage	Delivery of invoice No.	Bin code No.	Bottle	Halves	Other sizes
8/2/11	Port	12534	505	24	--	--

Fig: Format of Cellar Inwards Book

11.8.3. Cellar Control sheet / Ledger

This is used to record all daily deliveries and daily issues of each beverage from the cellar. The information entered in the Cellar Control Ledger should cross check with the Bin Cards and Perpetual Inventory Control Ledger.

HM Hotel

Cellar Control Sheet

Bin code no. (1)	Item (2)	Unit (3)	Cost (4)	Open Stock (5)	Per Chases (6)	Sub Total (7)	Issues (8)							Total (9)	Returns (10)
							M	T	W	T	F	S	S		

901	Calvados	Bottle	10.50	4	6	10	-	-	-	-	1	-	-	1	-

Fig : Format of Cellar Control Sheet

11.8.4. Bin Card : This is used to record all deliveries and issues of each beverage from the cellar. The bin cards are usually tied against the shelves or rack for each type of beverage.

HM HOTEL
BIN CARD

Item:_____ Maximum stock:-------

Bin.No.: _____ Minimum Stock: ----------

Date	**Receipt**	**Issue**	**Balance**

11.8.5. Goods Returned Book

HOTEL HM
Goods Returned Book

To,

ABC Enterprises Date:
Hazratganj, Lucknow No. :

Please issue your credit memo for items listed below with cost:

Quantity	Unit	Item	Price	TOTAL	Remarks
14	Bottle	King Fisher	150.00	2100.00	
05	Bottle	Royal Challenge	600.00	3000.00	

ot received due to poor packaging.

roller Acctt. Deptt Van driver Requested by

Fig: Format of Goods Returned Book

11.8.6. Requisition Book

Hotel HM **Requisition Form**					
To Purchasing office/Store From: F&B Manager Date: April 2, 2014			Requisition No.: FB 1201 Purchase Order No.: 1542 Date Required: April 5, 2014		
Item #	Description	Quantity	Unit	Unit Price/Unit	Total cost
Requested by: _____ Approved by: _____ Date Ordered _____					

Fig: Format of Requisition Form

11.8.7. Daily Beverage Inventory Sheet

This is used to record the daily consumption of beverages in the bar.

HM Hotel **Daily Beverage Inventory Sheet**									
Item	Opening stock	Receipts /transfer in	Total	Closing stock	Consumption	Unit cost Rs. p.	Extension Rs. p.	Spoilage	Remarks
SCOTCH									

(deluxe premium)									

Fig: Daily Beverage Inventory Sheet

11.8.8. **Cellar Perpetual Inventory Control Ledger**

This is used to record full details of all purchases, issues and closing inventory of each beverage from the cellar on a daily basis. This master ledger is prepared and held in accounts or control office.

11.8.9. Empties Outward Book

This is used to record all empty containers of beverages such as Kegs, Crates, and Beer bottles etc. which are returned to the supplier being charged for by the supplier against a delivery.

11.8.10. Ullages & Breakages Book

This is used to record all ullages and breakages together with an explanatory note and counter signed by a member of F&B Management Department. The term `Ullage' is used to cover all substandard beverages such as bottles of weeping wines, bottles of wine with faulty corks etc. which whenever possible would be returned to the supplier for replacement.

11.8.11. Wine List

HM Hotel **Wine List** **Unit Name:----------**		
Bin No.	**Sparkling Wine/ Champagne**	**Cost per glass / Rs.Per Bottle**
1001		
1002		
1003		
1004		
1005		
	Red Wine	
2001		

2002		
2003		
2004		
2005		
	White Wine	
3001		
3002		
3003		
3004		
3005		
	Fortified Wine	
4001		
4002		
4003		
4004		
4005		
	Other Wine	
5001		
5002		
5003		
5004		
5005		

11.8.12 Wine Cellar Issues:

HM HOTEL **Wine Cellar Issues** **Unit Name:** **Date:**					
S.No.	**Product**	**Vintage**	**Nos. of Bottles**	**Guest Check**	**Removed By**

Remarks :----------

11.8. Cellar Tools and Equipment

A good cellar should have all essentials tools and equipment, which should be stored in one part of the cellar over a workbench. It is a simple task entails building a rack for taps, mallets and other larger items. List of cellar tools and equipments are as follows:

- Adequate number of taps
- Vent pegs
- Scotches
- Shivers
- Spiels
- Corks
- Tapping plugs
- Hard wood or rubber mallet
- Gimlet for boring shivers
- Punch for knocking the holes
- Spanners
- Washers
- Filtering papers and filtering equipment
- Jugs
- Brushes for taps cleaning
- Brooms and scrubbing brushes
- Swabs and glass cloths
- Glasses for sampling and tasting
- Thermometer
- Torch and spare battery

- Vice on bench
- Washing soda and salt
- Disinfectant (outside the cellar)

Dos and Don'ts of Cellar Management

Dos

- Location: between bar and receiving area.
- Make sure the access to the cellar is controlled.
- Priority should be given to security of keys.
- Ensure cleaning of everything in cellar including walls, floors, ceilings, drains, pipes, and draining boards.
- Keep the cellar free from smell.
- Keep the cellar free from unnecessary gadgets.
- Keep your beer engines free from traces of dirt and yeast.
- Deal with returned beer promptly.
- Wash glasses well.
- Cork and peg the casks as soon as possible.
- Turn of taps of casks in use and tighten spiels at each of each session.
- Sample for all beers for brightness, condition, and flavor at the beginning of each day.
- Keep utensils spotless.
- Follow first in first out (FIFO).
- Spirits and liqueurs should keep upright.
- Port and Sherry should keep upright.
- Wines should be laid down.
- Keep separate bin cards for all wines and liqueurs.
- Keep a record of breakages and appropriate evidence.
- Unwrap all bottles and destroy the packing.

Don'ts

- Overstock
- Return stale beer to casks.
- Hang a thermometer on the wall.
- Permit warm or cold draughts in cellar.
- Be afraid to consulting brewer.
- Clutter up the cellar with lots of rubbish, odds and ends, or anything with a strong smell.

11.9. Summary:

The cellar plays an important part in the day-to-day operations of any bar, it's main role is to provide an area where beverages and stocks can be stored in a secure, safe, hygienic fashion, this area must be easily accessible with a good lighting system and only accessed by Senior staff

members with the appropriate Health and Safety training. Effective stock and beverage control can make a significant difference to the efficiency and the profitability of your bar business. Stock control is about having the right amount of stock on hand when it is needed. Efficient stock control will ensure that your bars financial capital is not tied up unnecessarily and it ensures that adequate levels of products are maintained to satisfy customer demand. Stock and beverage control can be useful in limiting losses to the bar through theft, fraud or poor working methods which can result in high levels of waste especially in perishable goods or breakages. It can also identify fast and slow moving stock. It is crucial that bar adopts a comprehensive system for the receiving, checking, storing and issuing of stocks, this system should be supported by an internal system of bar books to control all the products, services and functions of your bar. No control system can genuinely claim to be 100 percent safe and secure, if you accept this statement than it is crucial that your bar continues to identify problematic areas to control possible losses. The sustainability of any bar is based on its ability to generate profits, consider the formulation of a proper costing structure (updated regularly) and pricing policies for your bar which focuses in detail on the individual and collective cost and sales prices plus the gross profit margins achieved by your bar. It's crucial to adopt control systems and techniques which help to establish standard procedures for the preparation, size and production method for all your food and beverages.

11.10. Concept review questions

a. Define cellar and enumerate history of cellar.
b. Explain points to be considered while designing a cellar.
c. Enlist documents used in cellar management and draw formats of any two.
d. Explain climate conditions of a cellar and detail do's and don'ts of cellar management.
e. Prepare a checklist of tools and equipment required in a cellar.
f. Draw flow diagram and bar and cellar control.

11.11 Reference

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Unit 12

Bar card and Sales Promotion Techniques

Structure

12.0. Learning Objectives

By the end of the topic, students must be able to:

- To define Bar and types of Bar.
- To explain types of bar cards with their characteristics designing bar card
- To explain principles of designing bar card.
- To explain pointers of selection of drinks and beverages
- To explain sales promotion techniques in bar
- To explain role of sponsors in bar promotion
- To explain principles of excellence in bar service.

12.1. Introduction

Bars are very popular and profitable food and beverage outlets of the catering industry and serve different types of alcoholic beverages such as Beers, Spirits, Liqueurs, cocktails and Wines. The management of all these alcoholic beverages differs from each other due to various factors:

consumption patterns, cost involves, procurement and storage. Most of the beverages are promoted by their manufactures in their own style but there is a need to promote the beverages in-house to achieve maximum profitability and above all guest's satisfaction. There is a need to involve manufacturers of these beverages as a sponsor reduces the overhead expenses as well as to get the immediate feedback about their products. Principles of excellence are explained in the form of Bar Trade Tips.

12.2 Bar an Overview

12.2.1. Definition of Bar

A bar is a licensed establishment where alcoholic beverages are sold and served with or without meals for consumption on the premises.

12.2.2. Bar Licenses:

Bar Licenses are issued by Excise Department of the state and all states of the India have their own policies, licenses fees and formalities required so it is suggested to update yourself on time to time, here it is an attempt to deal with certain aspects of bar licenses:

Types of licenses:

L-3: License is used for service of liquor in a hotel to its residents.

L-5: License is used for service of liquor in exclusive Bar and in the restaurant in the hotel premises.

To get L-3 and L-5 a hotel should required completing the following documents:

1. Documentary proof regarding legal status of the hotel i.e. whether it is a company, partnership firm etc.
2. Whether the hotel is in legal possession of the plot.
3. Completion certificate in respect of the hotel building.
4. Trade license from the local authority.
5. Lodging license from local authorities.
6. Certificate of registration of eating house
7. Documentary proof regarding applicant being an Income Tax Assessee and Sales Tax Assessee.
8. Layout plan of the hotel, site plan of proposed bar and liquor stores.

Procedure: the applicant hotel is required to submit application to the Commissioner of Excise and after scrutiny of the papers submitted and same having been found to be in accordance with the rules, the hotel premises is inspected by the concerned Excise Officer from the department who submits the report to the license granting authority.

Note: No liquor shop for consumption "on the premises shall be located within a distance of 75 meters from the following namely:

- Schools, colleges and other teaching institutions.
- Religious places.

Once the hotel has been found to be suitable for grant of license, the views of public/ residents are invited on the proposal giving time for 7 days to file objections before the licensing authority. This is done through pasting of notices and public announcement in the area. After the week if there is no objection raised by public then competent authority proceeds with approval for grant of license. After approval, the hotel is required to submit fees as prescribed under the rules and after deposit of prescribed license fee, license is granted. A hotel can apply for a composite license (combination of L-3 and L-5).

Once the hotel has been found to be suitable for grant of licence, the views of the public/residents are invited on the proposal giving them 7 days time in this regard to file objections before the licensing authority. This is done through pasting of notices and also through public announcement in the area. After no objection has been received, the competent authority proceeds with approval for grant of licence. After approval, the hotel is required to submit fees as prescribed under the rules. On deposit of the same, licence is issued to the hotel. L-5 Licence for exclusive bar/restaurant within the hotel is granted in conjunction with L-3 Licence only and requirements listed above also apply for grant of L-5 License.

L-3 License Fee

L-3(Service of Indian Made Foreign Liquor in a hotel to the residents in their rooms)

- Hotel having 10 to 25 rooms Rs 40,000/-
- Hotel having 26 to 50 rooms Rs 60,000/-
- Hotel having 51 to 100 rooms Rs 1,20,000/-
- Hotel having 101 to 200 rooms Rs 1,80,000/-
- Hotel having 201 to 300 rooms Rs 2,50,000/-
- Hotel having 301 to 400 rooms Rs 4,00,000/-
- Hotel having 401 and above rooms Rs 4,50,000/-

L-5 License Fee

L-3 (Service of Liquor in a bar or restaurant attached to a hotel)

As per above stated Notification No the rate of L-5 License fee is as under

- 5 Star and above Rs 8.50 Lacs Per annum per endorsement
- 4 Star Rs 7.00 Lacs Per annum per endorsement
- 3 Star Rs 6.50 Lacs Per annum per endorsement
- 2 Star Rs 6.00 Lacs Per annum per endorsement
- 1 Star Rs 5.00 Lacs Per annum per endorsement
- Budget Hotel Rs 4.50 Lacs Per annum per endorsement

L- 4 License is issued in case of independent restaurant approved by Department of Tourism, Government of India and procedure for grant of a License is similar to the L-4, and L-5. Restaurant should be located in commercial area with adequate parking space.

L-19 is used for service of liquor/ Beer in a club. Applicant is required to submit application on the letter head of the club to the office of the Commissioner of Excise and the accompanying documents are to be as follows:

- Registration certificate in respect of club.
- Documentary proof in support of legal possession of the plot of the club.
- NOC from the area DCP.
- List of members of the club.
- List of the office bearers of the club.
- Resolution passed by the Management Committee to start the bar facility in the club and also to meet the liability thereof.

L-19 A is issued for the service of liquor / Beer at a club / mess whose membership is exclusively for Government servants and is not run on commercial lines. The documents / procedure required for granting L-19 A License is similar to the grant of license L 19.

L-19 License Fee

The following is the fee structure for L-19 License:-

- Club with membership up to 800 Rs 50,000/- per annum
- Club with membership from 801 to 1500 Rs 75,000/- per annum
- Club with membership more than 1500 Rs 1,50,000/- per annum

L-19A License Fee

The license fee for L-19A license is fixed to Rs 5000/- per annum. irrespective of the number of members of the club.

12.2.3. Types of Bar

Essentially, there are three kinds of bars:

1. **Front Bars:** where bartenders serve the customers face-to face, such as cocktail bar, public bar, lounge bar.
2. **Service Bars:** where customers' orders are given to the bartender by the wait staff, who serve the drinks to the customers, such as dispense bar.

3. **Special-purpose Bars:** usually set up for particular events, such as a banquet bar, function bar or catering bar.

The various types of bars may be listed as below:

- ***Dispense bar (service bar)*** is located in the service area and drinks are dispensed to the guests either in a restaurant or in the room. These are not the public bar.
- ***Cocktail bar or lounge*** mostly located in the hotel, restaurant and airports. These bars are meant for upscale market and have different varieties of alcoholic beverages including cocktails.
- ***Public bar (Pub)*** is the term mostly used in the U.K.
- ***Wine bar*** as the name signifies serves only different types of wines.
- ***Beer bar*** is similar to wine bar and serve beers. According to Indian Excise Act: beer bar can serve beer only while in other countries beer bars also serve spirits but not the wines and liqueurs.
- ***Club or Nightclub bar or Discotheque bar*** has provision of dance floor for their patrons and patrons may dance on recorded music and professional's dancers may also call for promoting sales of the bar.
- ***Wine shop*** is the term used in India for liquor shops and only for selling of alcoholic beverages and not meant for consumption on the premises. State of Haryana has unique features called Ahata (courtyard) where wine shops are adjoining with food and beverage outlets with open space for consumption of drinks.
- ***Retail bars or vends*** are widely used where consumption at large basically these are the automatic dispensing machines used for dispensing of beers and other spirits.
- ***Biker bars*** are very popular in USA and used by the members of the bikers (motorcycle).
- ***Single bar*** means only for single and they are of two types: for single male and single female.

Bar Facts File

- Taverns (Bars) of Canada and are very similar to Indian roadside Dhabas , long tables are provided with the benches and serve inferior quality of beers in large quarts and Canadian Rye whisky.
- Spain is well known for their bars and bars are the central point of social meetings and families are allowed to take their children's. Spain has highest ratio of bars that is 6 bars for every 1000 inhabitants where in UK it is 3 per 1000 and in Germany it is 4 per 1000.
- Muslim countries do not have bars and in few of the Muslim countries, bar is meant for non Muslims.
- Bengaluru have more than 250 beer pubs that are highest in one city of India.
- Gujarat is the dry state of India.
- Elite bar is very popular in England and only for members of the elite club.
- Night club bars provide special features of ***Gaming*** in number of countries.

- Smoking is not allowed in most of the bars of the world and has separate cabins for smoking.
- First bar was opened in the England.
- Bars of Italy provide complimentary cold pasta, vegetables and appetizers for their patrons.

12.3. Types of Bar Card

Bar Card or Beverage Menu: It is a card which focuses and specialized in various types of alcoholic beverages such as Beers, Spirits (whisky, rum, vodka, gin, brandy and tequila), Wines (aperitif, table, sparkling and fortified), Cocktails and Liqueurs. The basic purpose to promote the sales of bars as well as informed the connoisseur about the availability of the stock in the cellar. It is a selling tool and should be planned similar to the menu. Always remember that sales of alcoholic beverages give higher profit than the food.

Types of Beverage Menu:

- ***Wine list or menu*** is used in high price restaurant and up-market hotel. Card has all types of wines and seems like a small book and may have 15-40 pages in length. Wine list have all descriptions of the wines such as place of origin with the map of the country, grape variety used in production, quality status, vintage year. Wine list has an excellent cover and in loose leaf form so that individual pages may be updated when required and replaced. Price range for this type of wine list is always high due to the quality of the wines.
- ***Restricted wine list*** used in middle class of bars and has little choice of wines and has only most popular and well known brands of wines. Price ranges are lower than the full wine list and prefer to serve wine by carafe or glass.
- ***Room service beverage list:*** The size of the room service beverage list is based on types and standards of hotel and may be from extensive to small. Most of the hotel provide mini bar facilities in their guest room and stack it with wines, beers, mineral water, chocolate, pubgrubs (complimentary bar snacks most of the time in bars of India: peanuts)etc due to high cost of room service staff and that is the reason room service beverage list is not very popular now days.
- ***Special promotion beverage*** **cards** used by the industry to promote a wine/ spirit/cocktail and most of the time all these events are sponsored by suppliers and offer free of charge to the connoisseurs**.**

12.4. Designing Bar Card

A bar card is the primary tool for communications, sales and public relations of a restaurant/ bar/ restrobar . It may not bring your customers into the restaurant, but once they are there, the bar

card determines what they will order and how much they will spend. Thus a bar card is important to running a successful and profitable restaurant.
A bar card is a compilation of items available in the restaurant put on paper in form of words and illustrated in printed. It should be colourful, attractive, and clean and reflect quality, style and theme of the restaurant. A dirty, poorly printed, hard to read bar card creates a negative impression.

Features of a good bar card:

- Easy to understand
- Complete details of the menu items
- Ranges of choices
- Specified portion size
- Calorie content and details of nutritive value
- Price

Bar card is a valuable piece of literature in terms of selling products effectively in a food and beverage operation. It is a vital link between the diner and establishment and acts as a silent salesman of catering industry. The efficiency by which bar cards are merchandised to customers can affect the demand for the use of the food and beverage facilities as well as influence the selection of items and thereby the sales mix of an outlet. The bar card is without doubt one of the most important sales tools that caterers have but which unfortunately they often fail to use to the best or fullest advantage. As mentioned earlier in this chapter, it is necessary for all menus to be correct against the checklist of general presentation, cleanliness, legibility, size and form, layout and content. You must be concerned with the way in which you can most efficiently utilize the menu to optimize their sales.

"Menu merchandising refers to the application of menu as a powerful in-house marketing tool for promoting or optimizing sales in a food and beverage operation".

12.4.1. Pointers for Menu Merchandising: There are a number of basic factors you have to be considered to ensure the efficacy of menu as an in house effective sales tool for optimizing sales

Bar card presentation is very important as it identifies the image and personality of that particular unit or department whether it is a steak-House, or a cocktail bar. The following points should be taken into consideration:

1) **Attractive** The bar card should be attractive;' The first' impression of the bar card should be that it looks interesting and inviting and that the customers will really want to read it.
2) **Cleanliness It** should be **clean.** Although this appears to be obvious it is something that is frequently ignored by hoteliers and caterers. If it is intended that a particular bar card is

to be offered frequently it is well worth considering having them either' plastic coated so that they can be regularly wiped clean; or printed on inexpensive paper or card and regularly replaced or contained within a presentable and durable cover.

3) **Legible** It should be **easy to read.** It is usual to use different sizes of typeface for such things as headings and the items appearing under them. How typeface styles are used can help customers to make their choice of food and beverage items more easily. The use of attractive graphics, color and blank space can also help with aiding customers to make their selection by directing and attracting their eye. What is not required is that a menu should resemble a page from a railway or bus timetable with its mass of information produced in an unattractive style which besides failing in so many other ways would also be annoying to the customer.
4) It should **complement the occasion**. It is necessary that the general presentation of the bar card is not only in keeping with the decor of the bar but also suitable and complementary to the occasion. Obvious examples are a restaurant within a holiday camp, a kosher wedding, a state banquet and bistro, where a different style and presentation are necessary for each.
5) It should reflect **current awareness**. The bar card should take into consideration the current trends in eating habits, so as to be fully aware of customer requirements.

12.4.2. Bar card Design and Layout

Pointers for Shape, size, weight ,material and color:

- Use graphics, topography and color so bar card attract to the guests.
- Easy to understand and should not create confusions.
- Must work on photographs and special menu can be designed as mementoes for the guests in bar.
- For special occasion and for sales promotion bar card work on single sheet, central vertical fold, two parallel vertical folds, three parallel vertical folds to special cut shapes .
- **The size of bar card when printed and finished is important. Basically it should be related to the theme and style of selling outlet. All printed menus begin as standard sheets of paper or card of standard sizes.** Menu cards in India is generally printed on A series and size of the bar card should be standard and use the following table to determine the size of menu card:

Series	Standard sizes
A 0	841 mm x 1289 mm
A 1	841 mm x 594 mm
A 2	420 mm x 594 mm
A 3	420 mm x 297mm
A 4	210 mm x 297 mm
A 5	210 mm x 148 mm

A 6	105 mm x 148 mm
A 7	105 mm x 74 mm
Long size 1/8 A 4	210 mm x 99 mm
¼ A 4	210 mm x 74 mm

As it can be clearly seen from the above, the range of the 'A' series is obtained from the largest size, A0, and halving it in size for each subsequent size.

- Bar card/ wine list requires artwork and if possible hire the graphics designer as background knowledge of printing process is very essential.
- Too large bar card take lot of time in reading by the guests and too short bar card can't satisfied the need of a diner, so menu should be moderate. Wine menu can be in detail as it helps to diners to make their selection.
- Always think about eye movement and positioning of bar items.

12.4.3. Content of Bar card

The importance of this cannot be stressed too strongly if budgeted sales or costs are to be achieved. The content can be examined under the following headings:

1) **Language:** language should be clear and easy to understand and it is essential to provide accurate translation in English language if menu is written in any foreign language.

2) **Accuracy.** A very basic requirement for all menus is that when seen by customers they are accurate as far as pricing and availability are concerned, with the correct spelling and description of dishes and drinks. It is all too common to be presented with a menu or wine list to which untidy alterations have been made in handwriting.

3) **Pricing.** The correct pricing of all food menus and restaurant lists is very important to the success of an operation. It is essential that in total all necessary costs are covered; that the prices are attractive to the particular segment of the market that the operation is in; and that the prices are competitive in relation to the level, of quality of food and drink and service offered. Pricing strategy should be based on type of establishment, operation, competitors and desired profit.

4) **Methods of printing Bar card :**

   - Bar card should be clear to read as a printed menu and in good style.
   - Bar card can be duplicated by using stencils or duplicating machine.
   - Printed bar card are most popular and be careful of the letter press or offset litho. In letter press image of printing is transferred to the paper and advantages of this printing is to make alterations to the type are easy and quick. Offset litho is fast and convenient but alteration is not possible in this type of printing.
   - Desktop publishing is the use of an in-house microcomputer using a desktop software package and banquet menus, promotional and event are mostly printed.

By using desk top publishing you are free to re-design the bar card and quality of output can achieve by laser printer.

- Type and color of the paper is also one of the important aspects; ensure the thickness of the paper which varies from 120 g/m2 to 500 g/m2 and color of the menu card should meet with the color scheme of the restaurant and should not be subdued in the light. There are three types of paper finishes used in printing of the menu: absorbent, non absorbent and glossy finished papers.
- Always ensure varnishing after completion of all printing followed by lamination and then plastic zing to make it bar card stronger.
- Use different type faces for headings, subheadings and for descriptions. Don't be in antique style or too elegant, it may create lot of confusion to the guests. The style and size of typeface and the way that the type is set will affect the readability of the bar card. Usually two or three styles of type are used on any one menu, one for the main headings or subheadings, and one for the list and description of the items. A too elegant or antique styles may be confusing diners. The type and size should be such that customers will be able to read the bar card without difficulty. See table

MENUS SHOULD BE EASILY READ	10 PT (Times Roman)
MENUS SHOULD BE EASILY READ	*10 PT (Times Italic)*
MENUS SHOULD BE EASILY READ	10 PT (Calibri (Body))
MENUS SHOULD BE EASILY READ	*10 PT (Brush Script MT)*
MENUS SHOULD BE EASILY READ	10 PT (Angsana New)
MENUS SHOULD BE EASILY READ	10 PT (Aparajita)
MENUS SHOULD BE EASILY READ	10 PT (Arial)
MENUS SHOULD BE EASILY READ	10 PT (Arabic Typesetting)
MENUS SHOULD BE EASILY READ	**10 PT (Baskerville Old Face Bold)**

- Ensure logo of the company and quantity of the bar cards to be printed should be workout carefully and don't print menu card required in more than for a year. Printing all menus with the basic design features only with no price printed.
- ***Plan attractive visual effects, drawn up catchy names and blend it all into your image.***

5. **Shape and fold of bar card:** The physical shape of a menu will be determined by such criteria as the number of items to be printed on the menu, the items or style of the menu, the use of graphics, typeface and the occasion. The actual number of shapes possible to endless, from a single sheet, a central vertical fold, two parallel vertical folds, three parallel vertical folds, two/three/four vertical accordion folds etc, to special cut-out shapes for the special occasion or sales promotion menus.

Key steps of Menu Merchandising:

Bar card presentation	Bar card design	Bar card content
• Attractiveness • Durability • Compatibility • Legibility • Cleanliness	• Shape, size, weight • Pages, panels and folds • Graphics and layout • Eye movement and positioning of menu items	• Balance • Language • Accuracy • Printing • Pricing • Type and color of papers

12.5. Selection of Drinks and Beverages:

Selection of drinks and beverages required high level of professional commitment and lead to creating and designing a bar card. You have to be very careful while making selection of drinks and beverages. You will need to follow certain guidelines:

- Cater to your clientele and their preferences
- Consider Bartender's skills
- Consider equipment, glassware and space.
- Consider use of fresh ingredients.
- Plan the drink fairly simple so they can be making quickly.
- Consider profit margins.
- Creating signature cocktails as signature cocktails are born from innovative mixology and they are the result of brainstorming and current trends.
- Give emphasis of low cost brands and plan for multiple flavors in case of Gin and Vodka.
- Domestic spirits have larger market share in comparison to international brands so have more domestic brands.
- Consider calorie counts of the drinks.

Calories in Alcoholic Drinks

Type of Alcoholic Drink	Size of Drink	Number of Calories in Alcoholic Drink
Bailey's Irish Cream	1 glass	120
Bacardi	1 glass	128
Beer	500 ml	184
Lager	500 ml	180
Brandy	100 ml	220
Champagne	100 ml	126
Cider	500 ml	200
Drambuie	100 ml	184
Gin	100 ml	220
Martini	100 ml	175

Malibu	100 ml	204
Pernod	100 ml	140
Port	100 ml	160
Rose	100 ml	62
Sherry dry	100 ml	120
Sherry medium	100 ml	122
Sherry sweet	100 ml	130
Southern comfort	100 ml	184
Tia Maria	100 ml	155
Red wine	100 ml	70
White wine dry	100 ml	65
White wine medium	100 ml	70
White wine sweet	100 ml	90
Sparkling wine	100 ml	74
Whisky	100 ml	220

12.6. Positioning and placement of drinks and beverages:

Most of the Bar of the world follows a sequence in preparing a bar card or wine list:

- House wine
- Champagne and other sparkling wines
- Red wines
- White wines
- Fortified wines (Port, Sherry)
- Liqueurs
- Brandy (Cognac, Armagnac)
- Gin
- Vodka
- Vermouth
- Whisky
- Beers
- Mineral waters
- Fruit juices

12.7. Sales Promotion of Drinks and Beverages

Restaurant and bar owners alike are cognizant of the cost and revenue relationship. The goal is to increase revenue through sales and reduce costs by enforcing efficiency and quality.Ask a room full of food and beverage operators why they're in business and the likely response is "to make money." All except for the one businesswoman in the back, the one with the air of confidence,

who knows that the answer is "exceed guest expectations".

The formula for long-term success in this business is far from tricky. Keep the clientele intrigued and they and their discretionary income will continue to return. Dissatisfied guests will leave and tear out your listing from the yellow pages and advise everyone they come in contact with for weeks to do the same.

In this highly competitive marketplace, you're either on the way up, or on the way down. Taking a breather and maintaining status quo solidly fixes you at a point in space, allowing your competitors to surge past. Soon you'll be known as yesterday's concept, out of step and out of touch. Your employees will know it, your clientele will know it.

The same is true for your revenue stream. It's either healthy or growing, or it's not. The good news is that increasing beverage sales is an uncomplicated, straightforward process. The first key is to look at things like a consumer, which in fact you are. Regardless of whether we're talking about alcohol or not, we all drink. So the question renders down to what would your clientele, many of whom you know on a firsthand basis, be interested in sampling and find savory enough to order again.

The second operative condition is originality. Give people great drinks that quench their thirst and spark their imagination. If yours is the only place on the planet where they can get those particular libations, where else will they go? It's a time-proven practice.

If you think creating original cocktails is going to be the challenging part, it's not. Granted there's a bit of trial and error inherent in the process, but even that is neither painful nor costly. The procedure entails taking a drink concept, such as a Margarita, and tweaking its taste profile until it becomes something singularly delicious.

The final essential aspect of the strategy is to ensure that your operation is fully prepared for success. Are your people ready for the challenge? Have you outfitted your bar with the necessary equipment and inventory to deliver on the promise? Creating demand without being able to fulfill it is a pointless and frustrating exercise.

To streamline the process somewhat, here's my short list of ways of stating on the right side of the income curve.

- **Back Bar Orientation** — One can hardly expect to haphazardly throw products on the back bar and wind up with a cohesive marketing strategy. Get organized. Remove dead stock and make sure you have the premium products in each spirit category necessary to accomplish your objectives.

- **Order Takers** — Banish the order takers from your staff, those thoughtless individuals who merely deliver whatever people think to order. You need enthusiastic salespeople manning your bar, people who are intent in matching each guest with the right cocktail. Suggestive selling is not necessarily learned technique, rather it is a tried and true method of ensuring that guests are well served. As a bonus, a motivated sales staff will get seriously bump up your revenue stream.

- **Staff Training** — The most significant megatrend in the industry is that spirit sales are steadily increasing and people are drinking the good stuff. To sell premium products, your staff needs to understand what they are and what makes them worth the price you're asking. They also need to be taught to place an emphasis on service. Competent training improves staff performance, which in turn, positively impacts sales.

- **Infusions** — Infusions are a dynamic way to boost revenue. The secret to their success is that they're a fun and profitable way to create something exciting, something the competition can't duplicate. When you create a winning infusion, there's only one place to get it. You can turn virtually any spirit into something extraordinary by infusing it with everything from kiwis to sun-dried tomatoes. The process involves marinating fresh fruit, among other things, in large containers filled with spirits. Several days to a week later, the fruit will infuse the chosen spirit with flavor, color, aroma and loads of appealing character.

- **Champagne Drinks** — Nothing adds pizzazz to a celebration like champagne, so make every night memorable by promoting champagne-based cocktails. They're light, effervescent and thoroughly delicious. Eye appeal alone qualifies champagne cocktails as bona fide works of art. It's their luscious flavor, though, that makes them masterpieces.

- **Alcohol-Free Libations** — Creating alcohol-free libations involves as much skill as does mixing with spirits. There are scores of interesting and high quality products that can be used in their creation. More importantly, alcohol-free cocktails are every bit as delicious and worthy of public acclaim as any that feature alcohol. If you need some financial incentive before jumping on board, consider the magnitude of this untapped market. The demographics of alcohol-free drinkers include literally everyone. Consider also that alcohol-free beverages and drinks are loaded with profit. Add in that these libations can be served without incurring civil liability and you'll begin to see their true potential.

- **Beer Drinks** — Blending different types of beers together has long been standard practice in pubs throughout Europe and Australia, but has only recently become popular in the United States. Beer drinks are delicious, intriguing and an innovative means of increasing sales. Mixing beers requires balancing the attributes of one brew with the characteristics of another. The key is using two beers with appreciably different

properties—body, taste, texture, sweetness and bitterness. Don't stop at the Black & Tan, there are scores of intriguing recipes to tempt your clientele.

- **In-House Marketing** — Once you've created these masterpieces, let the world know about them through in-house marketing. Every bar should utilize a menu listing their signature drinks, beer offerings and food items available at the bar. Table tents are also highly effective marketing devices.

12.8. Bar Promotion Techniques and Events

How to increase sales through your menu? What is a beer menu? And how to get the most out of promotions?

Start with the menu: You can easily increase your sales with a little bit of help from the menu – for instance by suggesting beer or wine complementing the meal and by mentioning the special promotions. On the beer card, you can also mention extras such as finger food and snacks. Extra information whether in writing or in images is picked up by your customers and will influence their consumption behaviour.

Introduce a Beer Menu: Find three or four beers that fit together nicely. Offered as a Beer Menu this will guarantee a very special evening for your customers, especially for groups. Also popular is the Beer of the Month programme: a new beer offered each month with a snack that fits the beer.

Sales promotions: Use selling techniques to introduce any deals or promotions that your outlet may be running – for example '2 for £ for sharing'. This will add value for the customer as well as boost your sales volumes and increase overall spend per head. (*)

Appealing combo-deals: 'Combo-deals', meaning offering a combination of products, always work very well. These are appealing and may give your clients another mind set. The classic example of a combo-deal is of course coffee with a pudding, and there are numerous possibilities with beer and food combinations.

Beer tastings: Most consumers really like to experiment. Offering beer-tasting packages is a way for your customers to try new beers and will certainly work well for groups.

Visibility of your products: Using merchandising materials you can increase the visibility of products in your outlet, which will boost sales. An enormous range of materials is available, including dripmats, chalkboards, posters, glassware, etc.

For promotional purposes: Photos, paintings and other decorations that contain logos or nicely filled beer glasses. Make sure to display these materials at eye level, keeping both standing and sitting customers in mind. This way information can easily be seen and processed. Sales materials should always look fresh and attractive; replace them before they begin to appear worn. Avoid promoting too many brands at once; this will only confuse your customers. Branded glassware increases brand visibility in your outlet, which in its turn drives sales. Approximately

40% of consumers in Europe claim that attractive, branded glassware has a direct impact on their choice of beer. So having the right glasses gives you a powerful purchase influencer.

Standing venues:

- **Profiles:** Community outlets, night clubs
- **Primary hotspots for visibility:** Fridge, bar, back bar Useful items Fridge stickers, backbar displays, branded fonts, staff uniforms, illuminated signage, digital display screens

Sitting venues:

- **Profiles:** Restaurants, hotels, cafe wine bars, food pubs
- **Primary hotspots for visibility:** Table, menu, bar top Useful items: Menu inserts, table tents, menu holders, bar top standees, branded fonts

Try up selling: Upselling is a sales technique whereby your staff members encourage customers to purchase more expensive items, upgrades, or other add-ons in an attempt to make a more profitable sale. Up selling in your outlet can actually be quite easy: when customers orders 'a pint', ask which brand they like and suggest another comparable brand that they might not know yet. This could be anything: a new draught beer, a specialty beer, or a seasonal beer that has just arrived.

Cross selling works: Cross-selling is the action or practice of selling an additional product or service to your customers. It's a practice that also works in selling drinks and food. Just ask your guests when they have ordered a drink if they are interested in a related product, for instance olives to compliment the wine, or crisps with the beer. Most customers will react positively to your suggestions.

Selling alternatives: Sometimes one of your products is not available for sale. This might be a disappointment to your customers and can sometimes even be qualified as bad service. So when a product is sold out, make sure to offer an alternative, which will be valued as good service. Do make sure that the quality of the alternative product is equal, or preferably even better.

Promotion Techniques : There are 5 ways to promote sales of Beer

Serve properly:

1. The delivery and packaging of beer is essential in satisfying customers. First and foremost, the beverage must be served at correct temperature.
2. Be sure staff is trained in utilizing the proper glass for each type of beverages. Beer connoisseurs will most certainly notice incorrect usage of glassware and think twice about legitimacy and professionalism. This probably goes without saying, but please makes sure glasses are clean and pristine.
3. Pour beverages in a way that eliminates excess water waste or foam. This will save money and please guests.

Display Beers on Tap:

1. Have branded beer taps on display. Presumably customers notice selection beer on tap within your establishment, but why not strategically place more signage across the bar to promote beer.
2. An easy and affordable way to implement this suggestion would be by placing a chalkboard above the bar to draw attention to fine selection of beers.
3. Posters or menus that list beers on tap can be housed at each table and also displayed in restrooms or other high traffic points of the establishment.

Advertise, Advertise, Advertise:

1. There are multiple channels to employ when advertising products and establishment. In-house posters, Facebook, Twitter, and chalkboards outside of bar to bring in foot traffic are a simple techniques to consider.
2. Promote beer on social media. Upload photographs to raise awareness and invite customers to beer tasting event.
3. Consider sponsoring local events. Market yourself as the place to go after a event and provide discounts on the drinks fpr the participants.
4. Check out some of best beer social media campaign.
5. Cocktails are a huge money maker in the bar and restaurant industry. By mixing low cost alcohol with ingredients already stocked in bar.
6. To promote cocktails, a special drink menu is must. If you don't have the resources to design your own original menu, check out Bar menus for a selection of free templates you can personalize and print.
7. Run a beer week/month special.
8. Implement a contest, where customers can vote on their favorite beer on both special media outlets and in-house. This will excite both loyal customers in-house and potential customers that witness the hype on various social media platforms.
9. Provide an incentive to the winner by honoring the particular beer winner for a weekly special. Perhaps even showcase a photo with the winner holding his or her beer to show all patrons and build excitement for the next weekly or monthly special.

Value your customers: For anyone who is doing business it is natural to want to attract new customers, but it is even more important to value the regular customers in your outlet. You can do that by paying a little extra attention to them, asking if they want anything else to drink, if everything is all right, etc. These gestures are appreciated by your customers and affect your sales and turnover in a positive way.

Communicating and team meeting: Good communication with your customers is of course very important. This starts with good communication with your team. Make sure your team knows all about things like the beer of the month, promotional offers, and the speciality beers on the menu. This information should be a recurring item on the agenda of the team meeting, where you can also discuss the results of promotions or generate ideas for new offers with your team. This often leads to creative ideas and more commitment of your team.

Competition and bonus: A healthy competition among your staff won't harm anyone: who can sell the most glasses of Leffe, the most apple pies, or the most dishes of the day in one week? This will motivate your staff, especially if you link it to a nice bonus, such as a day out, a dinner, or a night at the cinema.

Knowledge of products: In order to be able to sell your products in the best possible way, your team needs to know what they sell and to be able to give the right information about the products. You can influence that strongly by having your team taste the products and providing them with key product information. A tasting session works very well for this and also encourages team spirit. Your team gets to know the menu and the new drinks while having a good time. As a result, they will be much more natural and convincing when recommending drinks and food to your customers.

Training your staff: Staff should be trained in actively approaching customers: welcoming customers, looking at them, listening to them, responding in an alert way, being polite, etc. It is also important that staff is aware of body language, for instance a certain hasty look of a consumer at the bar, or a restless person at one of your tables. Furthermore, your staff should be able to make small talk with your customers, in the right tone, with the right content and asking the right questions. The skills are all seemingly simple, but can have a major impact on your business.

Restaurant and bar owners alike are cognizant of the cost and revenue relationship. The goal is to increase revenue through sales and reduce costs by enforcing efficiency and quality.

12.9. Role of sponsors in bar promotion

Sponsorship provides a great means of broadening your competitive edge by improving your company's image, prestige and credibility by supporting events that your target market finds attractive. In recent years, corporate sponsorship has become the fastest growing type of marketing in the India.

Part of this growth can be attributed to the increasing numbers of small and medium-sized businesses involved. Previously, only large businesses could afford to sponsor because

marketing, for instance, as a way of boosting profits as well as establishing goodwill. However, now smaller companies are sponsoring everything from local activities to fairs, festivals and clean-ups of parks as an effective method of boosting their visibility in their community. Most of these sponsorships help these companies to enhance their public profile relatively cheaply. Irrespective of the size of the company, however, experts in the field tout a broad spectrum of benefits that can be gained by sponsorship aside from enhancing visibility and image, such as differentiating the company from competitors, helping to develop closer and better relationships with customers, both existing and potential ones, showcasing services and products, and even getting rid of outdated inventory. These experts go on to say that when sponsorships are strategic and well-conceived, they can boost both short-term and long-term sales.

Sponsorship Benefits: Sponsorship of bar in particular can be especially effective as a marketing tool because it can be a means of accessing a wide range of audiences such as decision makers in business, government entities, and of course customers. It can be particularly beneficial for companies that take part in international trade, because sponsorship transcends cultural and language barriers.A growing number of marketers think that corporate sponsorship is better than other methods as it provides opportunities to gauge customer response to products immediately. Events allow business owners or executives relate directly with their customers, while they give customers the opportunity to try out the products of a company firsthand. In comparison, marketing research methods such as focus groups are usually costly and may not focus on the right kind of people, while market surveys or questionnaires usually do not allow prospective customers the opportunity to try out products.

- Borrowed credibility from the property
- Sponsor can incorporate property into advertising and PR campaigns to better connect with audience. Immediate relevancy
- Use of property imagery that can offset production costs
- Provides multiple outlets and vehicles for communication, combines direct marketing, print advertising, face-to-face, word of mouth, target outdoor, targeted online advertising, etc.
- Multiple communication outlets help to deliver a complex B-to-B message on several levels
- Generally there are numerous opportunities for direct interaction
- Access to a very targeted and "clean" audience
- Better potential for a long-term relationship building
- Opportunity for more high-profile visibility
- Potential for business opportunities with the property
- Potential for business opportunities with cosponsors or related organizations
- Opportunities to showcase products and provide thought leadership
- Opportunities to conduct research or focus groups, access to research
- Opportunities to involve merchants or vendors

12.10 Principles of Excellence in Bar Service

1. Beverage service should be from right side of a guest, sommelier using his / her right hand. This permits the server to face the guest while serving and guest can speak comfortably to the sommelier if necessary.
2. Place drinks at the right hand side of the place setting, approximately at the tip of the largest knife to minimize the hands movement of most guests.
3. If there is no knife then beverages are placed on the right hand side of the guest approximately 12" from the edge of the table.
4. Sommelier should move clockwise around the table if possible.
5. Always carry salver on left hand.
6. Always use sharp knife to cut fruits for garnish.
7. Cover the fruit garnish with a damp cloth to maintain their freshness and crispness.
8. Keep the Bar equipments always clean and dry after every use.
9. As soon as the tin juices are opened pour them out in clean glass jars – to avoid tinning.
10. Never reuse the ice ones it's used. The second drink might be spoiled.
11. Always sprinkle some lukewarm water on the ice cubes, it removes the glossy appearance and makes them shiny.
12. Cocktails made with juices, egg white and cream are always shaken.
13. Cocktails made with vermouths and bitters are always stirred.
14. Use rubber mats on the floor to avoid slipping.
15. Always pour the drink in the peg measure holding the peg measure on the top of the glass – any spillage goes in the glass but not out of the glass.
16. Always replace the lid of the bottle after each use no matter how busy you are.
17. Place the bottle back in its position after each use helps in remembering as to where the particular brand of bottle is lying.
18. Always use ice scoop to put ice cubes for drinks – never try to use a glass for this purpose because if the glass breaks you have to throw away the entire ice.
19. Always taste juices & fresh cream before using them for cocktail helps in minimizing wastage of liquor. Stir juices before using them.
20. Always wash the cocktail shaker and strainer after each use so that the next drink is not spoiled.
21. After polishing glasses stock them upside down so that they do not collect dust in them.
22. Maintain a small diary in which you note down all the recipes of cocktails alphabetically – keep this with you always while working.
23. Check sodas and beers before service – if they are flat the drink will be spoilt.
24. Always put ice cubes in the glass first then pour the drink over ice cubes.
25. Take out any seeds from the fruit garnishes before using them.
26. Remember one short talk with the guest can help you sell one extra drink.
27. Shake the bottles of lime juice, squashes and sauces before using.

28. Behind the counter always ensure that the empty bottles and juices tins are thrown in the dustbin and should not be placed on the floor – they cause in convenience.
29. Hold beer bottle at an angle while opening it avoids beer to fizz out.
30. Never open a new bottle unless the first one is finished.
31. Handle all stemware gasses by the stems, not by the globe and glasses without stem hold from the base (bottom 2 inches) of the glass.
32. Never slide glasses on table and always put them.

Most appropriate glasses

- ***Rock glasses*** are used for serving Martini Rx, Manhattan Rx, Straight Liquor Rx, Sherry Rx, Old Fashioned, Cordials Rx, Dubonnet Rx, Black Russian and Sombrero.
- ***Highball glasses*** are most suitable for serving: Gin & Tonic, Rum & Coke, Scotch & Water, and Bourbon & Soda.
- Sambuca, crème de menthe, sherry Up, and Port Up are usually served in cordial glass (small Y-shaped).
- **White wine glass** (straight sides, tall, narrow, stem) is ideal for serving white wine, Irish Coffee, Juices Up, Bloody Mary Up, Sours, Collins Up, Marguerita Rx, Brandy Alexander Rx, Lillet, Hot buttered rum and regular Daiquiri.
- **Red wine glass** is one of the most appropriate glass for serving red wine, juices Rx, Bloody Mary Rx, Kir Rx, Collins Rx, Sangria and milk.
- **Champagne tulip** (tall, curved sides, stem) is used for serving Champagne, Strawberry daiquiri, Pina colada, champagne cocktail and Mimosa.
- **Pilsner** is used for serving all types of beers.
- **Brandy snifter** is ideal glass for serving Brandy, cognac, Benedictine, B&B and Double Bloody Mary.
- Martini Up, Manhattan Up, Gibson Up, Grasshopper Up, Cream Drinks Up, and Marguerita Up are served in **Cocktail glass**.

(Note: Rx= on the rocks or with ice, Up= without ice)

12.11. Summary

Chapter deal in details about the procurement of licenses to operate a bar and discuss types of bar are in operations in the international world. As we know beverage cost are always lower than the food cost and contribute significant profit to the establishment. Designing bar card and points to be considered while taking decisions about sequence of beverages to be listed in the bar card are highlighted in this chapter. Chapter also explain size, design and layout of bar card. Various latest and existing techniques of beverage sales promotion are listed.

12.12. **Questions :**

1. Define bar and enlist types of bar licenses used in a hotel
2. Explain types of bar card and detail the sequence of beverages to be followed while designing a bar card.
3. Explain types of bar with their unique characteristics.
4. Discuss points to be considered while designing a bar card.
5. Suggest pointers for excellence in bar service.

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UNIT 13

RECEIVING CONTROL

Structure

13.1. Learning objectives:

After reading and studying this chapter, the students should be able to:

- Explain aim and importance of Receiving.
- Explain receiving procedure.
- Setting of receiving department of a large catering organization.
- Explain and Draw the formats used in receiving department of a large catering organization.

13.2. Introduction:

Receiving control is one of the major activities of food and beverage control cycle and helps in achieving excellence in catering process. There are numerous activities when a receiving clerk can assist in not only to reduce the cost of food and beverage items but also to maintain the standards of the catering organization. The planning and control that goes into the purchasing process is wasted if no one ensures that products delivered meet the operation's standard purchase specifications. In too many operations, whoever happens to be "close to the back door" when a delivery is made signs the invoice. Great care must be taken to ensure an effective receiving process. Receiving is an important part of the product cost control system. This chapter explains all the issues related with the receiving process and control.

13.3. Aims of Receiving

The receiving process is concerned with the task of monitoring the receipt of all incoming merchandise thoroughly and systematically to ensure that the quantity, quality and price of each item delivered conforms exactly to the order placed. Aims of receiving are as follows

- The quantity of goods delivered matches the quantity which has been ordered. This means all goods will have to weighed or control.
- The prices stated on the delivery notes are in accordance with the price of purchase order form.
- When the quantity and quality of food ordered is not in accordance with the purchase order or an item is omitted from the order a request for credit note is raised by the receiving clerk.
- An accurate record is maintained in the Goods Received Book regarding details of the delivery.

Flow diagram of Receiving:

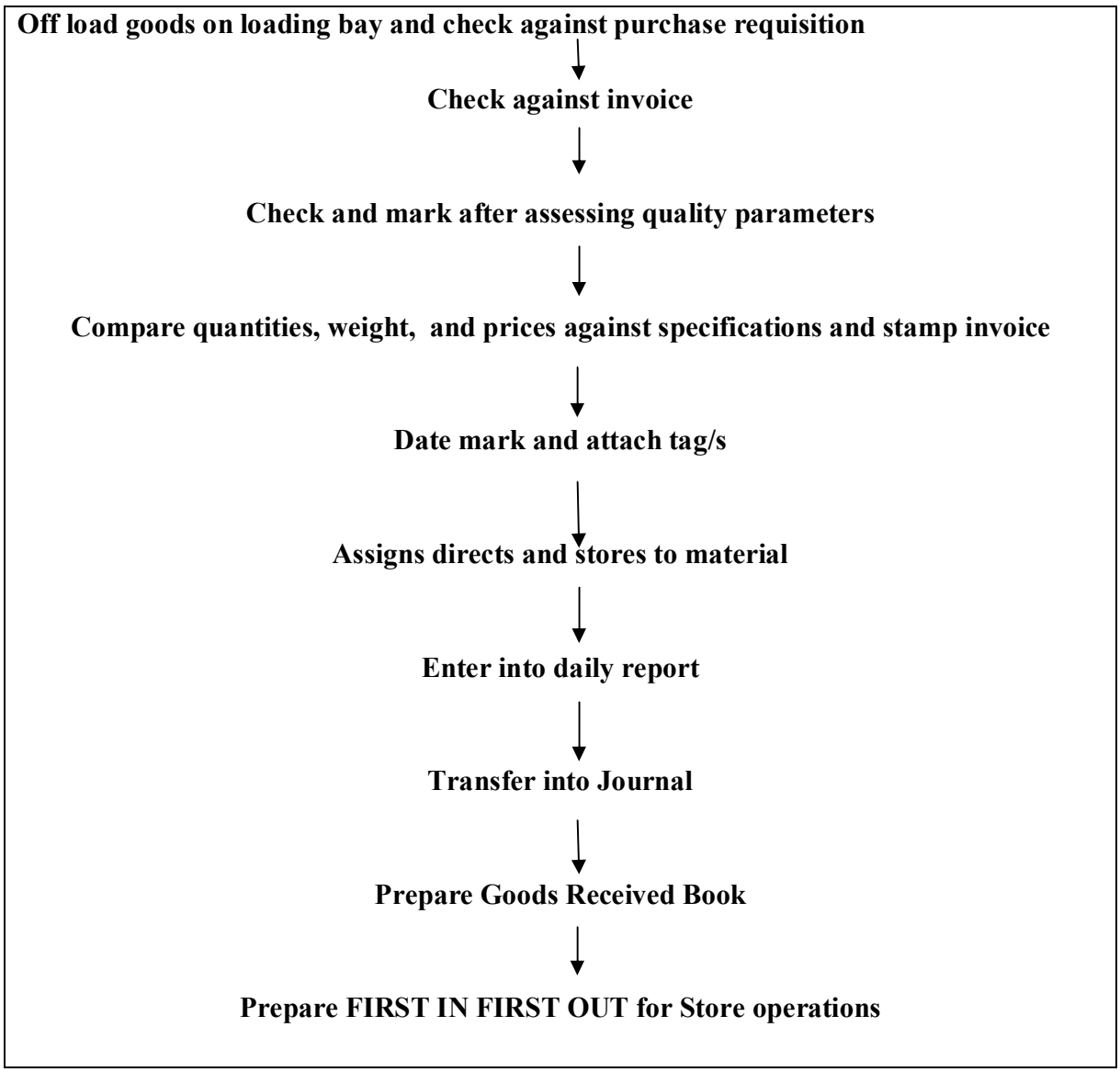


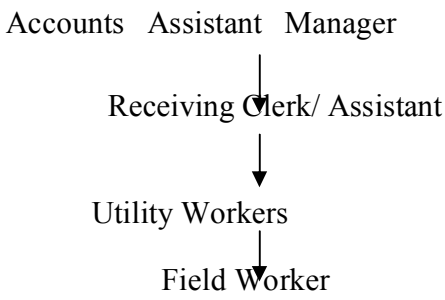
Fig: Flow diagram of Receiving

13.4. Organization Structure of Receiving Department*:*

The number of persons who receive products varies among food and beverage operations. In a small organization a receiving clerk can handle all the receiving activities and in a larger organization there is a need to establish proper organization in the receiving department. Receiving clerk/ assistant is responsible to perform all activities involve in the receiving process and documentation (record keeping) of the department. Receiving clerk is always responsible for Accounts Assistant Manager.

Chief Accountant

↓



(Fig. Organization structure of receiving department of a large catering organization)

13.4.1. Duties and Responsibilities of Receiving Officer:

- Scale being properly adjusted.
- Items are counted individually when received.
- Items checked for quality and uniformity.
- Receiving of goods by quality against standard purchase specifications.
- Perishable must be dated and priced on the container with wax crayons or tagged.
- Compare with challans /bills/purchase orders.
- Checks for quality, packing, specifications and quality.
- Each item must be weighed net without wrapping, ice container or packing material.
- In case of items for maintenance, housekeeping, stewarding, etc. it is checked by quantity.
- In case of perishables these are checked for quality by the Main Kitchen Chef and by the Butchery Chef in case if butchery items only.
- Selling of the scrap also.
- Making daily Receiving report, shortage receipt, scrap report, Gate pass and soft drinks book.
- Request for credit immediately issued where the weight/ count is less than invoiced or where inferiority quality.

13.4.2. Essentials of Receiving Clerk/Personnel

Effective receiving requires quality of receiving staff and receiving staff must possess following essential qualities:

- Well qualified and trained to receive properly.
- Must be aware about product quality standards and be able to recognize them when products are delivered.
- Must be aware all receiving procedure and knowledge of how to complete internal receiving records.
- Sound health and personal cleanliness.
- Well versed with sanitation standards.

- Must be able to use all required equipment, facilities and forms.
- Must have the ability to actual products delivered against purchase specifications, purchase orders and invoice.
- Must be committed to protect the interests of the operations.
- Cooperative, good sense of humor and eye for details.

13.5. Setting of Receiving Department:

There is no need to set a separate receiving department in small organization as store keeper is good enough to perform all the activities of receiving clerk as well as store keeper but larger organization required to set a separate receiving department due to various activities involved and volume of business.

13.5.1. Location of Receiving Department

Ideally, receiving department should be located near the delivery door, purchase department and stores to minimize the time and effort in movement of goods into appropriate storage areas.

13.5.2. Facilities

- Motorable road up to the entrance, (8 feet to 10 feet).
- Platform for unloading delivery trucks.
- Ramp to facilitate unloading of other delivery vehicles.

13.5.3. Layout plan

- Well lighted and adequately ventilated receiving area
- Interior distribution:
  - Receiving clerks' office
  - Weighing section
  - Washing section
  - Packaging section
  - Empties outward section

13.5.4. Receiving Equipment

- Weighing scales: Platform, Counter, Hanging.
- Cranes, Fork trucks, Lift Movable shelves, Trolleys and Carts for transporting goods.
- Scientific equipment to inspect the quality of goods.
- Bins, Baskets, Waste bins.

- Tools such as Can opener, Crow bar, Claw hammer, Short bladed knife for opening containers and packages.
- Thermometer for checking temperature of frozen foods.
- Marking & Tagging equipment
- Office equipment: table, file cabinet, calculator, computer, telephone, stationery etc.

13.5.5. Receiving schedule:

Receiving department of most of the hotels follow the schedule and basic purpose to make a schedule to control the flow of goods and assure the quality and convenience to suppliers as well as department.

Suggested timing for the suppliers:

S. No.	Items	Timing
1.	Vegetables and Fruits	9.30 am to 4.00 pm
2.	Groceries	10.00 am to 4.00 pm
	Miscellaneous	
3.	Soft drinks & Smokes	1.00 pm to 2.30 pm
	Meats	2.30 pm to 4.30 pm
	Poultry	
	Fish	
4.	Scrap Material	8.30 am to 9.30 pm
5.	Milk	9.00 am to 10.00 am
		5.00 pm to 6.00 pm

13.6. Receiving Control Procedure:

Receiving control procedure adopted by food and beverage operations includes the following:

13.6.1. Quantity inspection

To ensure that the quantity of the goods delivered is in accordance with quantity listed on the purchase order / invoice. This means that all goods will have to be weighed (for example, fresh fruits, vegetables, meat, etc.) or counted (for example, cases, crates, boxes, sacks, etc.). Organization does not want to accept items it didn't order, receive partial or no deliveries of required products, receive items of unacceptable quality, or pay a higher price than that agreed

upon. These problems can be encountered by comparing incoming products against quantity listed on the purchase order / invoice.

Tips for receiving: Typically it is not practical to weigh or count every case of the product being delivered so; Count selected cases on a random basis. Suppliers or delivery persons are less likely to short-weigh a count if they inspect random basis.

13.6.2. Quality inspection

To ensure that the quality of the goods delivered is in accordance with the quality established in the standard purchase specifications of the establishment. This requires knowledgeable and skilled receiving personnel. They should not be allowed themselves to be rushed by delivery process. There are number of occasions when suppliers will agree to deliver products on their own risks allowing the buyer to sign and send invoices after inspecting deliveries so a close coordination and cooperation is required when selecting suppliers.

13.6.3. Price inspection

The supplier provides the delivery invoice which becomes the basics for subsequent payment claim so ensure that prices stated on the invoice/delivery note are in accordance with the prices on the purchase order / invoice. A definite policy must be developed, implemented and enforced for the measuring, weighing, or counting of incoming products to ensure that the proper quantity of product is delivered and billed.

13.6.4. Dispatch to stores/user departments

The goods, having been checked for quantity, quality, and price must be removed from the receiving area to appropriate stores/user departments. For example, perishable food items to the kitchen and all other food items to the stores.

13.6.5. Clerical procedures

- Invoice stamping to acknowledge the receipt of supplies.

Stamping the Invoice		
Invoice stamp	Date	13th April 2014
Received		
Steward		
Prices and extension verified		
OK for payment		

Benefits of stamping:

- It provides verification of the date in which food item have been received.
- It provides signature of receiving clerk and voucher for accuracy of quantities, quality and price.
- It provides for the steward's signature acknowledging that the food item has been delivered.

- It provides for the signature approval of the bill for the payment by an authorized individual before a check is made.
  - Recording invoices on goods received book.
  - Raising 'Request for Credit Note' for shortages, breakages, sub-standard items etc.
  - Filling out meat tags for expensive food items.
  - Forwarding completed paperwork to purchase office.

13.6.6. Tips to follow while accepting food stuffs:

- Goods in damaged packaging or containers should themselves by checked for damaged.
- Cans badly dented or damage to be rejected.
- Check and inspect the interior of food delivery vehicles for cleanliness and any dubious circumstances reported.
- Reject all uncovered or open perishable food except fruits and vegetables.
- Reject all open foods which come into contact with floor or ground while being delivered.
- All the foods delivered in refrigerated lorries/ van should be sampled and check for correct temperatures.
- To separate beverage costs- liquor, beer, wine, soda from food costs. This information is needed for income statements that isolate revenue and "cost of goods sold categories" for these items.
- To add up the value of " directs" in a daily food cost assessment sheet.
- To transfer responsibility for the product control receiving to storeroom Personnel.
- Compare purchase order/ daily Perishables order with the delivery challenges, for correct quality, price packing and items.
- Preparing of Daily Food Receiving Report and tags for perishables and meat items.
- Preparing of Beverage receiving Report for the liquor, smoker and Soft Drinks.
- Preparing of Miscellaneous Receiving Report (with subject to approval) from the department concerned.

S. No.	Items	Circulation of copies
1.	Food receiving report	i) 1st copy F&B Control
		ii) 2nd copy book copy.
2.	Beverage Receiving Report	i) 1st copy F&B Control
		ii) 2nd copy book copy.
3.		i) 1st copy attached to bill to the challan

	Miscellaneous Receiving	ii) 2nd copy book copy.
4.	Gate Pass Book	i) Security
		ii) Purchase
		iii) Book copy
5.	Scrap Sales Book	i) Accounts
		ii) Purchase
		iii) Book copy
6.	Soft Drink Record Book	i) Chief accountant
		ii) F&B Manager
		iii) F&B Control Department
		iv) Book copy

Note:

- Gate pass book preparing for the scarp items.
- Preparing of scrap items sales book.
- Preparing of soft drink record book.

Invoice Receiving: The method of receiving goods against the invoice accompanying the goods being delivered by the supplier.

Blind Receiving: The method of receiving goods against purchase order with quantity column blanked out. The main purpose of the system is to compel indifferent receiving clerks to weigh and count all goods coming into the establishment. The system works as follows:

- The receiving clerk is sent a copy of the purchase order which lists the goods to be purchased but does not show the quantities of such goods.
- The receiving clerk is required to count and weigh all goods received and record the quantities of all incoming goods.

Note: All invoices/delivery notes, in such circumstances, are sent direct to the accounts office. The receiving clerk has, therefore, no access to these documents.

Advantages of Blind receiving:

- It is an excellent method.
- It gives the best possible result.

Disadvantages of Blind receiving:

- Expensive and time consuming.
- It puts extra burden to purveyors, he has to make a separate list of items for you.

13.7. Assessing Performance and Efficiency of the Receiving Department

The purchasing officer must be responsible for the receiving department and for its operating efficiency. In order to discharge his responsibility, he must consider the following points:

1. Maintain a very close working relationship with the staff in receiving department.
2. Conduct spot-checking different supplier's deliveries each week for quantity, quality and price.
3. Check if all the necessary paperwork is done properly and in time.
4. Ensure that the receipt of goods is done as quickly as possible and sent direct to the stores, cellar or any other user department.

Computerized Receiving System Through Bar Code

Modern Computerized Technology is now helping some food and beverage operations with the receiving task. Over time, many additional properties will take advantage of technology as products are received. Packing cases containing food and beverage products often have universal product codes/ bar code information attached. Data indicates product name, purchase/ delivery date, product price and perhaps other information. An optical scanner is used to read this information and, at the same time , update perpetual inventory levels and develop daily receiving and other reports desired by management. This process allows for rapid generation of important control information with minimal chances of error.

13.8. Hygiene & Cleanliness of the Receiving area

The following points must be considered to ensure hygiene & cleanliness of the receiving area:

1. Receiving area should be well lighted and adequately ventilated.
2. Receiving areas must be clean and free from litter.
3. Waste bins, empty return boxes, etc. should be kept tidy and safe.
4. Waste bins must be kept with lids on and emptied frequently and kept clean.
5. All receiving equipment should be kept clean and functional.

13.9. Yield and Yield Test:

The number of portions produced by a given standard recipe.

HM HOTEL

Yield Test Summary Report

Item: Chicken Curry	Total raw weight as purchased: 3 Kg 400 gm
Purchase specification: 437	Total cost: Rs.408.00
Standard recipe No.: 520	Cost per Kg.: Rs.120.00

Cooking and preparation details	Weight in Kgm.	Percentage original weight

As purchased weight	***3 .400***	***100%***
(less) initial trimming	***.680***	***20%***
Presentation weight	***2.720***	***80%***
(less) un-servable weight & skin	***.544***	***16%***
Total servable weight	***2.176***	***64%***

Ratio of servable weight to original weight

= servable weight = 2176/3400 = 64%
original weight

Cost per servable Kg

= as purchased price per Kg = 120/ 64 =187.50
% original weight

Cost Factor

= cost per servable Kg = 187.50/ 120 =1.5625
as purchased price per Kg

Portion cost (at 250 gm per portion size)

= cost per servable Kg = 187.50/4 = Rs.46.875
no. portions per servable Kg

13.10. Receiving Documents

1. Documents from the supplier
   - Delivery Notes
   - Invoice/Bills
   - Sheets
   - Credit Notes
2. Documents maintained in the Receiving department
   - Purchase order
   - Goods received book
   - Daily receiving report
   - Meat tags

13.10.1. Delivery Notes

These are sent with goods supplied as a means of checking that everything ordered has been delivered. The delivery note should also be checked against the duplicate purchase order.

13.10.2. Invoices / Bills

These are bills from a vendor for goods supplied or services rendered. An invoice should be sent on the day the goods are dispatched or the services are rendered or as soon as possible afterwards. Invoices contain the following information:

- The word ***'Invoice'***
- Name, address, phone and fax of the firm supplying the goods or services.
- Name and address of the firm to whom the goods or services have been supplied.
- Date on which the goods or services were supplied.
- Particular of goods or services supplied together with prices.
- Particulars of discounts, if any and taxes as applicable.

INVOICE
MARKET PROCE MEAT COMPANY
11, AISH BAGH
LUCKNOW

To
Purchase Manager
Vivanta By Taj
Gomti Nagar,
Lucknow
226011 Date: 13/4/2014

Quantity		Unit		Description		Unit Price		Amount	
10		Kgm		Strip Loin		650	00	6500	00
10		Kgm		Veal Loin		800	00	8000	00
						Total		14,500	00

13.10.3. Sheets/ Statements

These are summaries of all invoices and credit notes sent to clients during the previous accounting period, usually one month. A statement is usually a copy of a client's ledger account and does not contain more information than is necessary to check invoices and credit notes.

13.10.4. Credit Notes: These are advices to clients, setting out allowances made for goods returned or adjustments made through errors of overcharging on invoices.

HOTEL HM

Credit Memorandum/ Form

To,

ABC Enterprises Date:
Hazratganj, Lucknow No. :

ue your credit memo for items listed below with cost:

Quantity	Unit	Item	Price	TOTAL	Remarks
14	Kgm	Frozen liver	250.00	3500.00	
05	Kgm	Top side of beef	200.00	1000.00	

Reason: 1. Liver not delivered but invoiced
2. Beef not as per specifications.

F& B Controller Acctt. Deptt Van driver Requested by

Fig: Format of Credit Memorandum

13.10.5. Purchase Order Form : The purchase officer/ manager places the purchase order with the supplier giving details of quantity and quality of items and five copies of purchase order are made in different color codes such as:

- First White color copy: sent to supplier
- Second Yellow color copy sent to Accounts department
- Third Green color copy sent to receiving department
- Fourth Pink color copy sent to Purchasing department
- Fifth off white color copy retained in purchasing office and kept in date order wise and retained till the goods are received and then filled under order numbers.

Hotel HM					
Purchase Order					
To,				Purchase order No.: _____ Date: _____ Requisition No.: _____ Department.: _____	
Ship to: _____		F.O.B.		**Via _____**	
Item	Description	Quantity	Unit	Price/ unit	Total cost
Total value of order:					
Terms & Conditions: ***1.*** ***2.*** ***3.*** ***4.***					
Purchase Manager					

Fig: Format of Purchase Order

13.10.6. Goods Received Book / Daily Receiving Report: This is used to record the details of all the deliveries of goods made by the suppliers.

HOTEL HM
Goods Received Book

Date:

Delivery Note	Supplier	Total	Dry Store	Meat	Poultry	Fish	Kitchen staff	Carvery	Main kitchen	VAT
1234	ABC & Co.	150.00	50.00	2000.00	1000.00	1500.00	500.00	2000.00	2000.00	1000.00

Fig: Format of Goods Received Book

13.10.7. Meat Tag: In many catering establishments, it is common practice to tag most expensive food items such as meat, ham, seafood, shellfish and smoked salmon after accepting it

for quantity and quality. A meat tag is a stock card perforated for division into two parts, used to record in duplicate the following information about an item:

HM Hotel Meat Tag	
Meat Tag No	HM/ Lamb/12
Item	Lamb
Cut	Full carcass
Supplier	ABC Company
Weight	8 Kg
Unit price	120.00
Total value	960.00
Date of receipt	10/04/2014
Date of issue	12/04/2014
Meat Tag No.	HM/ Lamb/12
Item	Lamb
Cut	Full carcass
Supplier	ABC Company
Weight	8 Kg
Unit price	120.00
Total value	960.00
Date of receipt	10/04/2014
Date of issue	12/04/2014

Fig. Format of Meat Tag

One part of the meat tag is attached by string or wire to the food item and the second part is sent to the control office with the invoice to be used as an inventory control device.

13.10. Frauds in receiving department:

Example for supplier frauds/ theft possibilities when products are received includes the following:

- The supplier may deliver lesser quality items, such as inexpensive domestic wines instead of higher quality wines.
- Short weight or short counted products may be delivered.
- 30% fat content ground beef instead of 20% and the operation pays for high quality.
- Thawed products may be represented as fresh.
- Ice may be ground into ground meat products.
- Weigh of ice or packaging may be included.
- Slacked out seafood –frozen fish, thawed and packed in ice may be sold as fresh.
- Inject water in the wings/ breasts of chicken and freeze them.

Receiving control practices adopted in five star Hotels of India

1. **All goods are received at the centralized receiving department.**
2. **Deliveries are accompanied by the covering invoice and check at the receiving dock by receiving clerk/ assistant.**
3. **A senior level of kitchen staff is deputed for inspecting the quality of food items.**
4. **Receiving clerk issue a credit memo if goods/ products is returned to the supplier due to any valid reasons and most of the time it is due to underweight of the product/ poor packaging.**
5. **Receiving clerk accept separate invoice of food and beverage items.**
6. **Goods are checked against invoice and examined specially on price, quality and quantity.**
7. **Receiving clerk stamp and sign invoice to acknowledge proper receipt of goods.**
8. **Meat tags are used frequently for all types of expensive meat and fish items.**

13.12. Summary

The primary task of receiving department is to ensure that the organization is receiving correct quality and quantity of items supplied as per the purchase order specifications not only in quantity but also in quality and the price charged as per the contracted rate. The job of receiving clerk is very technical so he must be competent enough to deliver his/ her job and must be well experienced, qualified and trained to perform his/ her duties. Receiving procedure comprises of different eight stages and all the activity involved in the receiving process must be well documented and recorded. The area provided for receiving department should be large enough to handle the large quantity of goods and it should be easily cleanable and washable. Area should be also well lit and as far as possible must have the natural light coming during day time. Receiving departments should have all types of measuring devices and equipments to measure or weigh all types of goods. The ramp must be made so that the goods can be carried through trolley.

13.13. Concept review questions

1. Why receiving is important and how it helps in reducing the food cost.
2. Discuss ideal location, and facilities of receiving department .
3. Enlist formats used in receiving departments and draw formats of any two:
    - Daily receiving report
    - Purchase order form
    - Meat Tag
4. Enlist points to be considered while receiving food items.
5. Discuss duties and responsibility of a receiving clerk.
6. Detail the essentials required to be a successful receiving personnel.
7. Detail receiving procedure with the help of a flow diagram and state aims of receiving department.

8. **Differentiate between:**
    - Quality and quantity Inspection
    - DRR and BRR
9. **State True or False:**

- All goods received will be checked for quantity and quality.
- All goods received are recorded in Credit note.
- Copy of purchase order supplied to the receiving department does not show the quantity ordered.
- Delivery note is prepared by receiving department.
- Lactometer is used to check the fat content of meat by receiving department.

10. **Analytical Problem: (complete the following table):**

HM HOTEL
Yield Test Summary Report

Item: Lamb cutlet — Total raw weight as purchased: 4.200 Kg
Purchase specification: 650 — Total cost: ?
Standard recipe No.: 234 — Cost per Kg: Rs.200.00

Cooking and preparation details	**Weight in Kgm.**	**Percentage original weight**
As purchased weight	***3.400***	***100%***
(less) initial trimming		***17.3%***
Presentation weight		
(less) un-servable weight & skin		***21.2%***
Total servable weight		***61.5%***

Ratio of servable weight to original weight

= servable weight =
original weight

Cost per servable Kg

= as purchased price per Kg =
% original weight

Cost Factor

= cost per servable Kg =
as purchased price per Kg

Portion cost (at 120 Gm per portion size)

= cost per servable Kg =
no. portions per servable Kg

Case study: Assume that you ordered 40 kg of meat products from Meena Meats. The purchase order was prepared showed the following information:

Item ordered	Unit Price (Kg)	Total Quantity ordered (	Total price

		Kg)	
Hamburger	225.00	10	2250.00
NewYork Strip Steak	300.00	20	6000.00
Corned Beef	350.00	10	3500.00
		Total	11.750.00

When the Meena delivery person arrived, all three items were in one box and the deliverer was in a hurry. He, therefore, suggested that your receiving clerk simply weigh the entire box. Your receiving clerk did just that and found that the contents weighed 40.500 Kgm . Since the box itself weighed about 500 gm , she signed for delivery. When she began to put the meat away, however, she weighed each item individually and found the information as below:

Item ordered	Unit Price (Kg)	Total Quantity ordered (Kg)	Total price
Hamburger	225.00	15	3375.00
NewYork Strip Steak	300.00	10	3000.00
Corned Beef	350.00	15	5250.00
		Total	11.625.00

If you called the supplier to complain about the overcharge 125.00 total price 11750- 11625= 125.00 you would likely be told that the misdelivery was simply a mistake caused by human error. It may well have been, but the lesson here is to always instruct your receiving personnel to weigh delivered items individually, even if they are in a hurry.When an item is ordered by weight, its delivery should be verified by weight. It is up to the operator to train the receiving clerk to *always* verify that the operation is charged only for the product weight delivered. Excess packaging, ice, or water in the case of produce can all serve to increase the delivered weight. The effective receiving clerk must be aware of and be on guard against deceptive delivery practices as far as the delivery of the agreed-upon product is concerned. Verifying the weight of product alone, however, will not ensure that we have received all the goods we ordered.

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UNIT 14

STORING & ISSUING CONTROL

Structure

14.17 Reference

14.1. Objectives:

After reading and studying this chapter, the students should be able to:

- Explain aim and importance of storing control.
- Explain key characteristics of setting of storage department of a large catering organization.
- Explain types of storage.
- Discuss duties and responsibilities of storekeeper.
- Explain and Draw the formats used in receiving department of a large catering organization.
- Explain stacking of commodities.
- Explain documentation in storing and issuing control.
- Explain different techniques of inventory control

14.2. Introduction

The main function of this department is to store and issue Food and Beverages items that pertain to of Food and Beverages operations of the hotel and catering organization. Store department is the direct responsibility of the Chief Accountant of the hotel; this could be called for termed as a sub-department of the Accounts Department. The storing and issuing control play an important role in linking receiving and production. Managers of food and beverage must recognize that product costs and quality are affected by these departments. Poor handling of commodities in store can bring up the cost of food up to any level so effective controlling measures are required to bring down the spoilage, damage and stolen of commodities. There are various reasons why strict storage and issuing control are needed. Chapter explains principles of effective storage and issuing control, documentation for close monitoring of these areas and practices adopted by the hotel and catering industry for inventory control.

Definition of Store: In some countries store is to refer a retail outlet- such as general store or a department store from which goods are sold, mainly to individuals, who are commonly called consumers but in reference to the hotel and catering industry," ***Store is an area aside into which all items and materials required for production and / or for sale distribution are received, where they are housed for safekeeping and from which they will be issued as required".***

Stock control : The various items and materials received into, housed in and issued from stores commonly referred to collectively as being stock (or inventory) hence the use of term stock control.

Stock control comprises the mainly clerical and administrative function of store work and it involves:

- Ensuring that the right types and qualities of items needed for production, are always available when required.
- Ensuring that stock is issued in the correct sequence, that is First in First out (FIFO), so that older stock is not allowed to deteriorate by being kept too long in the store.
- Maintaining records showing the movement of the items into and out of store, controlling and monitoring those movements and maintaining full records of the items in the store.
- Ensuring correct levels of various items are set and mainlined, that orders and reorders are made in good time, and that what is ordered is received.
- Checking, counting, or otherwise measuring stock to ensure that records are accurate and that no losses are occurring due to pilfering, theft, damage or poor storage.
- Pricing and valuing the item in the store.

14.3. Aims of Store Control:

Functioning of storing the commodities start immediately as soon as it comes from receiving area if commodities are left in the receiving area for a longer time then refrigerated and frozen products can easily deteriorate in quality and dishonest employees may get opportunities to steal and that's why received products are required to move immediately and placed in appropriate storage area according to nature of commodities so their quality and security can be better ensured by the control procedures built into the property's storage system. A clean, orderly food store, run efficiently is essential to fulfill the following main aims of store control:

- Stocks of food can be kept at a suitable level, so eliminating the risk of running out of any commodity.
- All food entering and leaving the stores can be properly checked; this helps to prevent spoilage.
- A check can be kept on the percentage profit of each department of the establishment.
- Keeping products secure from theft and retaining food quality.
- Providing information necessary for the financial accounting system.

14.4. Planning storage spaces: a well planned store should include the following features:

Location

- **Proximity to sources of supply:** It should be convenient position to receive goods being delivered by suppliers and also in a suitable position to issue goods to the various departments.
- **It should be cool and face north so that it does not have the sun shining into it.**
- It must be well ventilated, vermin proof and free from dampness.

14.4.1. Lay out:

1. A reception plate form : 90 cm in length at the delivery point to prevent excessive lifting
2. A make up counter in the centre is necessary for holding commodities before they can be arranged in their assigned places in the store or issued directly to user department.
3. Store items must be placed at height which allow for easy reach & readibility so that time is not wasted in trying to search for items when required. There should also sufficient space between items to allow them to be easily reached & replaced.

14.4.2. Structural features:

1. Ceilings of the stores : 3.5 to 4.0 metre
2. Enamel painted walls & ceilings
3. Floors of concrete & heavy tiles. The junction between the wall and floor should be rounded to prevent the accumulation of dirt
4. Racks of metals or any other non porous materials & situated 5 cm away from walls and should be easy to clean.
5. Shelves : There should be ample well arranged storage space, with shelves of varying depth and separate section for each food. These sections may include deep freeze cabinets, cold rooms , refrigerators, chill cabinets, vegetable bins and container stores. Space between shelves may vary from 50 to 90 cm.
6. Recommended height for racks is 8 fet.
7. Lighting: fluorescent in a row at right angles to the shelving & must be fitted high enough about the top most shelves of the store.
8. Ventilations: It must be well ventilated, vermin proof and free from dampness.
9. A good standard of hygiene is essential, therefore, the walls and ceilings should be free from cracks, and either painted or tiled so as to be easily cleaned.
10. A wash hand basin, soaps, nail brush and hand drier must be provided for staff; also a first aid box.
11. Efficient and easy to clean weighing machines for large and small scale work should be supplied.
12. Steps to help staff reach goods on high shelves and an appropriate trolley should be provided.

Physical layout	**Measurements**
Width of gang way	90 cm
Width of aisles for one person movements	60 cm
For person carrying a load	65 cm
For 2 person to pass	70 cm

With load to pass	90 cm
For hand truck	120 cm
For 2 hand trucks	200 cm
Turning space for hand truck	200 cm

14,5. Duties of a Store Keeper:

- To keep a good standard of tidiness & cleanliness
- To arrange proper storage space for all incoming food stuffs
- To keep up to date price list of all commodities
- To ensure that an ample supply of all important food stuffs is always available
- To check that all orders are correctly made out & dispatched in good time
- To check all incoming stores quality , quantity & price
- To keep all delivery notes, invoices, credit notes , receipts & statements efficiently filled
- To keep daily store issue sheets
- To keep set of bin cards
- To issue nothing without receiving a sign chit in exchange
- To check all stocks at frequent intervals
- To see that all changeable container are properly kept, return& credited –i.e. All money change for sacks, boxes etc.
- To obtain the best value at the lowest price
- To know when food are in or out of in the season

Essentials which go to making the Good Store Keeper

- Experience
- Knowledge of how to handle
- Care & organized the stock
- A tidy mind & the sense of details

- A quick grasp of figures
- Legible hand writing
- A liking for a job
- Honesty.

14.6. Types of storage

1. Non- perishable: or dry storage: Cereals, nuts, eggs , cakes, pulses, sugar, flour, jams, pickles and other bottled products etc.

2. Perishable: Meat, fish, poultry, game, dairy products, vegetables and fruits

14.6.1. Dry storage:

Food store is a place for the storage of dry ingredients (store at room temperature of 20- 25 c) storage should be dry & cool , well ventilated & free from infestation of any kind in order to maintain the food in good condition. It is suitable for non-perishable & semi perishable commodities; it may be divided into 5 categories:

1. Non perishable and semi perishable commodities
2. Store for cleaning supplies
3. Equipments store
4. Misc. Store (linen, stationery & disposable)
5. Trash store (waste materials)

14.6.2. Low temperature storage:

- Refrigerated storage 0 degree to 10 degree c
- Cold storage 0 degree to -5 degree c (chilled room)
- Freezer storage -20 degree to 0 degree c

Food	**Temperature**
Fruits & vegetables except banana	1.1 to 7.2 C
Dairy products	3.3 to 7.8 C
Meat & poultry	0.6 to 3.3 C
Fish & shell fish	-5 to –1.1
Frozen foods	-18 to –6.7 C

14.7. Arrangement / Organization/ Stacking of Commodities

- Arrange food items according to type of commodity and in ABC Order as follows:

Cereals	**Canned**	**Nuts**	**Spices**
Bajra	Apples	Almonds	Chilies
Barley	Apricots	Cashew	Coriander

1. Stamp date of delivery on every stock received before shelving to ensure that old stocks are used up first.
2. Place items on shelves according to date stamped, with earlier once in front of row , & later once at the back
3. Mark prices on stocks as well.

4. Arrange products to give an organized appearance. Efforts should be made to ensure then commodities do not lie around on the floor at any time.

IMPORTANT TIPS FOR STORAGE

1. All old stock should be brought forward with each new delivery.
2. Commodities with strong smells or flavors should be stored as far away as possible from those foods which absorbs flavor easily.
3. Breads should be kept in a well- ventilated container with a lid. Lack of ventilation causes condensation and encourages moulds.
4. Cakes and biscuits should be stored in airtight tins.
5. Due to fewer preservative additives, many bottled foods now need to be refrigerated once they are opened.
6. Cleaning materials often have a strong smell; therefore they should be kept in a separate store.
7. Cleaning powders should never be stored near food.
8. Tinned goods should be unpacked , inspected and stacked on shelves, these points should be looked for:
    - Blown tins – this is where ends of the tins bulge owing to the formation of gases either by growth of bacteria or by the food attacking tin plate. All blown tins should always be thrown away as the contents are dangerous and the use of contents may cause food poisoning.
    - Dented tins- these should be used as soon as possible, not because the dent is an indication of inferior quality BUT because dented tins, if left, will rust and a rusty tin will eventually puncture.
    - Storage life of tins varies considerably and depends mainly how the contents attack the internal coating of the tin which may corrode and lay bare the steel.

14.8. Documents used in store control:

- Bin card
- Stores ledger
- Departmental Requisition book
- Order book
- Stock sheet
- Delivery note
- Invoice
- Credit note
- Statements

14.8.1. Bin card There should be an individual bin card for each item held in stock. The following details are found in the bin card.

HM HOTEL BIN CARD Item:_____ Maximum stock:------- Bin.No.: _____ Minimum Stock: ----------			
Date	**Receipt**	**Issue**	**Balance**

14.8.2. Store ledger/book:

It is found in the form of loose sheet or leaf file giving one ledger sheet to each item held in stock the following details are found in store ledger sheet.

- Name of commodity
- Classification
- Unit
- Maximum & minimum stock
- Date of goods received & issued
- From whom they are received & to issued
- Invoice & requisition numbers
- Quantity received
  - Issued & balanced
  - Unit price
  - Cash value of goods received
  - Issued balancing cash total of goods held in stock. Every time goods are received or issued the appropriate entries should be made on the necessary stores ledger sheet & bin cards, in this way the balance on the bin card should always be same as the balance shown in your stock ledger.

BIN No. Description Classification Code Unit Maximum Minimum

Date	**Details**	**Invoice or Requisition Number**	**Quantity**			**Unit price**	**Value**		
			Received	**Balanced**	**Issued**		**Received**	**Balanced**	**Issued**

Fig: Stores Ledger Sheet

14.8.3. Departmental requisition sheet/ book: Separate book for each section or department different in colors.

HM HOTEL

Requisition No.----------

Date:----------

Item	Storage Unit	Requested Amount	Issued Amount	Unit Cost	Total Cost
Total					

To : Kitchen
Bar

Requisition Approved By:----------

Requisition Filled By:----------

Fig: Requisition – Storeroom

14.8.4. **Order book:** This is in duplicate and has to be filled by storekeeper every time he/ she wishes to have goods delivered. Whenever, goods are ordered, an order sheet must be filled in and sent to the supplier, and on receipt of goods they should be checked against both delivery note and duplicate order sheet. All order sheets must be signed by storekeeper; details found an order sheet are as follows:

- Name and address of catering establishment
- Name and address of supplier
- Serial number of order sheet
- Quantity of goods
- Description of goods to be ordered
- Date
- Signature
- Date of delivery if specific day required

HOTEL HM

ORDER BOOK

To : Ram Sahay & Co.

Sl. Order No: .....

Aminabad, Lucknow

Date of order : .....

Date of Order Required:.....

Item #	Description	Quantity	Unit	Price/Unit	Total cost

Storekeeper Signature :					

Fig: Order Book

14.8.5. Stock sheet: Stock is taken at regular intervals of either one week or one month spot checks are advisable after every three months. The stock check should be taken where possible by an independent person thus preventing the chance of pilfering the details found on the stock sheets are as follows:

- Description of goods
- Quantity Received issued & balance
- Price/unit
- Cash column.

The stock sheet will normally printed in alphabetical order all fresh food stuffs such as meat, fish, vegetables will entered in the stock sheet in the normal manner but as they are purchased and used up daily a nil stock will also be shown on their respective ledger sheet.

14.8.6. Delivery notes are sent with good supplied as a means of checking that everything ordered has been delivered the delivery notes should also be checked against a duplicate order sheet

14.8.7. Invoices are bills sent to client settings out the cost of goods supplied or services rendered invoice should be sent on the day the goods are dispatched or as soon as after wards. It contains following information's:

- Name address & tel. Nos. of both the parties
- The word invoice
- Particulars of goods with price

- A note concerning the terms of settlement.

14.8.8. **Credit Note:** Credit notes are advices to clients, setting out allowances made for goods returned or adjustments made through errors or overcharging on invoices. They should always be issued when chargeable containers such as cartons, crates, boxes or sacks are returned. They are usually printed in red whereas invoices are always printed in black. A credit note should be sent as soon as possible to the client to the credit of a sum with which he has been previously charged by invoice.

CREDIT MEMO
HM HOTEL

Vendor: Delivery date:
Invoice: Credit Memo:
Correction

Item	Quantity	Short	Refused	Price	Credit Amount
Total					

Original Invoice Total:----------
Less: Credit Memo Total:----------
Adjusted Invoice Total:----------

Additional information: ----------

Vendor Representative: ----------

Vendor Representative Telephone: ----------
Operation Representative: ----------
Operation Representative Telephone: ----------

Fig. Credit Memo

14.8.9. Statements: Statements are summaries of all invoices and credit notes sent to clients during the previous accounting period, usually one month. They also show any sums owing or paid from previous accounting periods and the total amount due. A statement is usually a copy of

client's ledger account and does not contain more information than is necessary to check invoices and credit notes. When a client makes payment he usually sends a cheque, together with the statement he has received. The cheque is paid into the bank and the statement may be returned to the client duly receipted.

14.9. Stock taking

14.9.1. Monthly and Annual Stock Taking: A monthly stock taking and inventory of items ate carried out by the F&B controls staff. On the last day of every month a physical count on every food and beverages item is carried out in the presence of the stores personnel. After obtaining the physical count by weighing and Laos counting, the details are taken down on paper. In the mean time stores open new bin cards accordingly to the new physically account.

The idea of stock taking is to reconcile the physical consumption with the actual consumptions. The annual or the year end inventory is carried out by eternal audit form with stores personnel as well as the F&B controls staff in attendance. All the documents of the store such as bin cards, requisitions copies etc are sealed and initialized but the auditor. Then a physical count is taken and written down in three copies. In case of perishables new tags are made.

While the physical count is taking place, test checks are carried out by the auditors at random to see whether the counting is carried out properly. The details are taken down in three copies and are signed by all the three parties i.e. the auditors, storekeeper and F&B controller.

These are compared with the Cardex and if there is any difference then the necessary action is taken.

14.9.2. The advantages of monthly and annual stock taking.

1. The value of the stock in hand is known.
2. Identifying dead items.
3. Helps in re-ordering items.
4. To keep a track on slow and fast moving items.
5. To know the overstocked items and to inform the Chef.
6. To know the value of consumption.
7. Help in sorting out mixed up bins items.
8. The different between the actual physical consumption.

14.9.3. Cardex maintained by storages

1. Cereal and pulses
2. Spices
3. Rice and Pasta products.
4. Dairy products
5. Sugar items and biscuits.
6. Dry fruits.

7. Dates
8. Tin vegetables and oils
9. Colors and essences.
10. Vinegar and sauces

Apart from the above, Cardex for liquor (L-3 and L-5), smokes and soft drinks are maintained separately.

Tips to follow

- Uncontrolled temperature and humidity can lead to evaporation or absorption of moisture and result in drying or sogginess and provide suitable conditions for the microbial growth.
- Damage to food like fruits and vegetables can cause enzymatic and oxidative discoloration affecting their quality.
- Direct sunlight on milk, milk product or vitamin B2 containing food can affect the content of vitamin.
- Presence of white ants, rodents and other pests can damage the flavor and quality of cereals and pulses and make them unfit for consumption.
- Poultry, fish, meat and leafy vegetables items can not retain more than 24 hours at 21 degree Celsius.

14.10. Issuing Control:

As we know that all the commodities are stored in store except certain perishable goods which mostly sent to the user department such as kitchen and that' why there is a need to issue the food commodities from the store. If a food and beverage does not limit access, to storage areas and keep records of items removed, it is not possible to compare the quantity of products removed from the storage with the quantity of items produced or the level of revenue generated. Limited access to storage areas and special procedures for issuing products from storage to production is essential for effective food and beverage controls.

The objectives of an issuing system can be met by using techniques available to food and beverage operations of all sizes**.** Establishing standards & standard procedures for issuing control should address the following concerns:

1. Setting up a Requisition System
2. Pricing the requisition

14.10.1. Setting up a Requisition System

A requisition system is a highly structured method for controlling issues. All storeroom issues should be made against a written requisition signed by an authorized person, often the Chef. Whenever practical, it is advisable that requisitions be submitted in advance to enable the

storeroom clerk to prepare the order without haste.The items listed on requisitions fall into two categories:

- **Directs:** The food category charged to food cost as received, e.g. perishable food items
- **Stores:** The food category charged to food cost as issued, e.g. staples and tagged items.

14.10.2. Pricing of Commodities (requisitions or material issues):

- **Actual Purchase Price:** This method involves pricing of commodities at as purchased price.
- **Simple Average Price:** This method involves pricing of commodities at a simple average price.
- **Weighted Average Price:** This method involves pricing of commodities taking into account both quantities as well as prices thus giving a more accurate average price.
- **FIFO Method:** This method involves pricing of commodities at the earliest purchased price. This may be applied to items which have a fluctuating market price.
- **LIFO Method:** This method involves pricing of commodities at the latest purchased price. This also may be applied to items which have a fluctuating market price.
- **Standard Price:** This method involves pricing of commodities at a standard price for a specified time period, usually 3-6 months.
- **Inflated Price:** This method involves pricing of commodities at an inflated price i.e. cost plus, say 10% or 15% to recover the cost of handling and storage charges.

14.11. Records used in Issuing Control

14.11.1. Requisitions

HOTEL HM
PURCHASE REQUISITION

To Purchase office/Store Requisition No: .....
From: . Purchase Order No:.....
Date: ..... Date Required:.....

Item #	Description	Quantity	Unit	Price/Unit	Total Cost

Requested By:---------- Approved By:----------Date Ordered:----------					

Fig: Requisition Slip

14.11.2. Transfer Notes

14.12. Hygiene & Cleanliness of area:

Neglect in the care of cleaning of any part of premises and equipment could lead to a risk of food infection. Work place and personal hygiene is of very great importance to:

- Clean working conditions are more agreeable to work in that dirty condition.
- No one want to go in a dirty place and contact with a person who is not clean and maintain the hygienic standards.

Preventive measures:

1. Adequate ventilation must be provided . windows used for ventilation should be screened to prevent entry of dust, insects and birds. Good ventilation facilities the evaporation of sweat from the body, which keeps one cool.
2. There must be hand washing and drying facilities.
3. Good lighting is necessary so that people don't strain into their eyes.
4. Floors have to be withstand a considerable amount of wear and tear , therefore they must be :

- Capable of being easily cleaned
- Smooth, but not slippery
- Even
- Without cracks or open joints
- Non-absorbent (impervious)

5. Thorough cleaning is essential: floors are swept, wash with hot detergent water and then dried. This can be done by machine or by hand and should be carried at least once a day. As a safety precaution, suitable warning signs should be used to alert staff if the floor is wet.

6. Wall must be cleaned and this probably be done monthly.
7. Ceiling should not be able to harbor dust.
8. Doors and windows should fit correctly and be clean. The glass shoul be clean inside and out so as to admit maximum light.
9. Trolleys should be kept very clean and no particles of food should be allowed to accumulate.

14.13. Summary:

Topic highlights the various principles and techniques of storing and issuing control used in hotel and catering industry. The various types of storage with their appropriate location, structural features, space requirement are explained. Approaches of stock taking have been given with the practices of pricing of commodities. List of documents used in storage and issuing control have been given with their formats.

14.14. Case study:

Mr. Siddhartha Seth owns and operates a 160 seats licensed sea food restaurant in Colaba beach, Mumbai. Since he opened the restaurant in 2003, the business has provided an adequate return to him and he judges his success has been largely due to the maintaining of highest standards in food production and presentation. The menu and drinks list have remained fairly static over the five year period and he feels that this fact, more than any other, will guarantee continued success. Staffs are familiar with their work and standards are easy to control.

The restaurant provides a good level of service and the prices attract businessmen as well as local people for lunch between 13 hrs to 15 hrs ; passing tourists are also attracted during the season. Evening meals are available from 1930 and last order taken at 2300 hrs, with trade coming from local and tourists equally. Restaurant closes on Monday. Six months ago, Siddhartha was advised by his doctor to take work a little easier, so he appointed a full time manager to handle day to day running of the restaurant. Siddhartha calls in tow or three times a week to keep an eye on the business. However the manager feels he is not giving sufficient scope for developing the business. The number of staff leaving and staff absenteeism has risen significantly.

In order to remedy the situation, Siddhartha has approached you, with a view to your suggesting what should be done to put the restaurant back on its feet again. In your preliminary discussion with Siddhartha, you discover that he has not been spending much each year on refurbishing the premises and the level of maintenance and hygiene has given rise to an informal warning from the department of Health. Siddhartha does have the resources available for re-modeling and re-furbishing the premises, and he does recognize that some of the existing equipment needs to be replaced.

You have talked to some of Siddhartha's client and the impression gained is that whilst the restaurant is conveniently situated, reasonably priced and the food of a good and consistent standard, the menu has become stale and unimaginative.

The restaurant uses fresh foods extensively, particularly fish, and these are obtained daily from the local market. However, failure to forecast demand adequately often leads to either over production or to items on the menu being discontinued.

The staffing as at the 15th May 2009 comprised:

Manager	01	Chef	01
Waiters full time	12	Cooks	06
Waiters part time	06	Wash up/ porters	04
Cleaners	04	Barmen	02

The operating statement for the past three years is as follows: (All figures are in INR.

	2006-07	2007-08	2008-09
Food sales	1,00,00,000	1,05,00,000	1,07,00,000
Less food cost	40,00,000	43,00,000	44,00,000
Gross profit	60,00,000	62,00,000	63,00,000
Beverage sales	32,00,000	34,00,000	35,00,000
Less beverage cost	15,00,000	16,00,000	18,00,000
Total gross profit F &B	77,00,000	80,00,000	79,00,000
Labor costs	15,00,000	16,00,000	16,00,000
Over heads	18,00,000	19,00,000	20,00,000
Maintenance	6,00,000	9,00,000	11,00,000
Net operating profit	38,00,000	36,00,000	32,00,000

The menu used in the restaurant comprises:

Starters	**Soup of the day**	**Entrée**	**Sweets**
Fruit Cocktail	Fish Soup	Curried Mixed Fish	Peach Melba
Deep Fried Prawns	Minestrone	Grilled Pomfret	Gulab Jamun
Shrimp Cocktail	Lobster Bisque	Lobster Thermidor	Cream Caramel
Smoked Fish	Cream Of Tomato	Grilled Lobster	Assorted Ice Creams
Tomato Shorba	Cream Of Chicken	Vegetable Biryani	Fresh Fruits
Fish Pate	Soup Of The Day	Vegetable Augratin	Triffle Pudding

You are required to submit a report to Siddhartha; your report should include the following:

- An analysis of trading results for 2006-09.
- An analysis of evaluation of six main problem areas.
- An outline of six additional information you would require in order to obtain a fuller understanding of the situation in the restaurant.

- Your recommendations for management implementations.

14.15. Concept review questions

1. Enlist benefits of marginal costing.
2. What do you understand by budgeting? Enlist the budgets prepared by a five star hotel.
3. State the significance of budgetary control in modern business.
4. Enlist different methods of purchases used by a five star hotel.
5. Draw the format of any two of the following:
    1. Meat Tag b. Credit Memorandum c. Purchase order
6. Explain points to be considered while selecting a supplier.
7. Differentiate between any two of the following:
    - Daily Receiving Report and Blind Receiving Report
    - Re Order Level and Maximum Order Level
    - Purchase Order and Requisition Slip
    - Perishable Goods and Non Perishable Goods
8. Explain food cost control cycle with the help of a flow diagram.
9. State duties and responsibilities of a purchase manager or store keeper.
10. Draw a layout plan of a receiving department.
11. Enlist key structural features of a store room.
12. Explain relationship of store with other departments of hotel.
13. **Write short answer of the following:**

- An important aspect of stock control involves
- Store and production department work in cooperation to ensure
- Why store is said to be non-productive department
- Efficient stores management is vital to ensure that
- The essential function of a store department is to provide

14.16. Suggested activities:

- Visit a five star hotel and interview storekeeper to identify the specifications of various commodities used in food production department.
- Collect information about the rate of various commodities through daily news papers and prepare a chart on the basis of your findings and stick it on the walls of your class room and check inflation on every month.
- Analyze the process of storage of various commodities at your college and prepare a report and discuss with your faculty.

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UNIT 15

SALES CONTROL

Structure

15.0 Objectives

- Student knows about the Sales and ways of expressing selling.
- Student knows about sales price.
- Students know Calculation of selling price.
- Student knows factors to be considered while fixing selling price.
- Student knows Matching costs with sales.
- Student knows Billing procedure – cash and credit sales.
- Student know Cashier's Sales summary sheet.

15.1Introduction

Sales control involves an evaluation of all marketing efforts with reference to predetermined standards of performance. Like any other control system, sales control requires the establishment of standards, the evaluation of actual performance and the correction of deviation in performance. Sales control implies not only managerial action with regard to actual sales, but it also embraces all other marketing functions required for the even flow of products or services form producers to consumers. All promotional and auxiliary efforts in marketing require as much control as the actual selling efforts demand. Nevertheless, control of promotional and auxiliary efforts in marketing is more difficult and cannot be exercised with that exactness which is possible in case of actual selling efforts. Because of their intangible performances, ancillary activities in marketing are placed under some broad measures of control, and they are measured and appraised by managerial judgment, skill or experience. The basic tool for controlling these efforts is to be found in the sales expense budget . The basic tool for controlling these efforts is to be found in the sales expense budget. The development of a sales expense budget compels the managers to think analytically for including all possible selling expenses, to make marketing

efforts more productive and effective, as well as to keep the marketing cost of products or services withing fixed bounds.

For controlling performances of salesmen, the sales budget or in the asbsence of a sales budget, the sales programme provides the standard for control. Usually, the sales forecast is the first step in sales planning and contains goals to be achieved. These goals are subsequently translated into greater details and are incorporated in the sales budget, or in the sales programme. Final sales planning, whether through budgeting or programming, is the synthesis of a complex group of plans like objectives, policies and procedures in the sphere of sales. Thus performances of salesmen are measured and evaluated against the standards set up in the sales budget or programme. But in most cases, the standards are expressed in terms of money value or rupee figures of sales. Strictly speaking, effective control cannot be exercised in terms of rupee sales alone. The number of product units sold, the number of calls attended, the number of demonstrations give, the number of miles traveled of control. According to the nature of product and market characteristics, one or more control standard are to be used for apprasing the performances of salesmen.

15.2 Sales – ways of expressing selling

Selling is offering to exchange an item of value for a different item. The original item of value being offered may be either tangible or intangible. The second item, usually money, is most often seen by the seller as being of equal or greater value than that being offered for sale.

A person or organization expressing an interest in acquiring the offered item of value is referred to as a potential buyer, prospective customer or prospect. Buying and selling are understood to be two sides of the same "coin" or transaction. Both seller and buyer engage in a process of negotiation to consummate the exchange of values. The exchange, or selling, process has implied rules and identifiable stages. It is implied that the selling process will proceed fairly and ethically so that the parties end up nearly equally rewarded. The stages of selling, and buying, involve getting acquainted, assessing each party's need for the other's item of value, and determining if the values to be exchanged are equivalent or nearly so, or, in buyer's terms, "worth the price."

From a management viewpoint it is thought of as a part of marketing, although the skills required are different. Sales often forms a separate grouping in a corporate structure, employing separate specialist operatives known as *salespersons* (singular: *salesperson*). Selling is considered by many to be a sort of persuading "art". Contrary to popular belief, the methodological approach of selling refers to a *systematic process of repetitive and measurable milestones, by which a salesman relates his or her offering of a product or service in return enabling the buyer to achieve their goal in an economic way*. While the sales process refers to a systematic process of repetitive and measurable milestones, the definition of the selling is somewhat ambiguous due to the close nature of advertising, promotion, public relations, and direct marketing.

Types of selling

Selling is the profession-wide term, much like marketing defines a profession. Recently, attempts have been made to clearly understand who is in the sales profession, and who is not. There are many articles looking at marketing, advertising, promotions, and even public relations as ways to create a unique transaction.

Two common terms used to describe a salesperson are "Farmer" and "Hunter". The reality is that most professional sales people have a little of both. A hunter is often associated with aggressive personalities who use aggressive sales technique. In terms of sales methodology a hunter refers to a person whose focus is on bringing in and closing deals. This process is called "sales capturing". An example is a commodity sale such as a long distance sales person, shoe sales person and to a degree a car sales person. Their job is to find and convert buyers. A sales farmer is someone who creates sales demand by activities that directly influence and alter the buying process.

Many believe that the focus of selling is on the human agents involved in the exchange between buyer and seller. Effective selling also requires a systems approach, at minimum involving roles that sell, enable selling, and develop sales capabilities. Selling also involves salespeople who possess a specific set of sales skills and the knowledge required to facilitate the exchange of value between buyers and sellers that is unique from marketing, advertising, etc.

Within these three tenets, the following definition of professional selling is offered by the American Society for Training and Development (ASTD):

> " The holistic business system required to effectively develop, manage, enable, and execute a mutually beneficial, interpersonal exchange of goods and/or services for equitable value.[3] "

Team selling is a one way to influence sales. Team selling is "a group of people representing the sales department and other functional areas in the firm, such as finance, production, and research and development". (Spiro) Team selling came about in the 1990s through total quality management (TQM). TQM occurs when companies work to improve their customer satisfaction by constantly improving all of their operations.

15.3 Determining Sales Price

Terms relating to selling prices are:

• Purchase price: this is the cost price – the price you pay to buy the product

• Mark-up: this is the amount you add to the purchase price to get the selling price

• Selling price: this is the retail price – the amount you sell the goods for.

Calculating the selling price

The formula for calculating a selling price is:

Selling price = purchase price + mark-up

Mark-up is normally expressed as a percentage of the buying price.

What is ‘sales’?

The term ‘sales’ is often used to mean the money you earn from the sale of your product or service. Sales may include:

• Money from products you have purchased and then sold

• Money you have earned from selling your labour and/or services

• Money you have earned by selling things you have made or assembled.

Note: the Goods and Services Tax (GST) applies where annual sales exceed $50,000. Benchmarking

Once you’ve set your selling price, you need to test, or benchmark it against what your market will pay. There’s little sense in having a high selling price if consumers will not buy it at the price you’re asking.

With benchmarking, you compare how your business operates with businesses in similar industries. It can alert you to opportunities for improvement. You compare your business figures (for example, gross profit margin, turnover, and profitability) with other businesses. You should benchmark during your initial planning process and then on a regular basis.

Benchmarking resources

There are various organisations and resources you can use to obtain information on benchmarking your business, including:

• The Australian Bureau of Statistics (ABS)

• The Financial Management Research Centre (FMRC)

• IBIS reports

• Prac Dev Key Indicator Reports.

Cost of goods sold

After your business’s first trading period, you'll need to calculate your profit. The first step in this process is determining the cost of goods sold. One of the methods used to determine cost of goods sold is: cost of goods sold = opening stock + purchases – closing stock

• Opening stock: is the stock you have in your business at the start of the trading period.

• Closing stock: is the stock you have in your business at the end of the trading period.

You should consider a number of issues in this calculation, such as the freight in, which refers to the cost of freight on the goods purchased. Seek professional advice when you calculate your cost of goods sold.

Purchases (buying price of stock)

This is the value of the stock you have bought or manufactured during the period. In businesses where goods are manufactured, other expenses that appear in the cost of Goods sold may include raw materials, manufacturing expenses, manufacturing labour.

Gross profit and the trading account

Once you know the value of your sales for the trading period, and you have calculated the cost of goods sold, you can calculate your gross profit. The gross profit calculation is one of the most important calculations you will use in your business. It is also known as the trading account, because it shows how much money you made from your trading activities.

Gross profit is calculated from the trading account using the simple subtraction of sales (in dollars) less cost of goods sold (in dollars). This report is calculated for a set period of time. The calculation used to determine gross profit is:

Gross profit = sales - cost of goods sold

Gross profit margin

Gross profit, expressed as a percentage (%) of sales, is referred to as the gross profit margin. The calculation used to determine the gross profit margin is:

Total sales - purchase price X 100

Total sales

It's important to understand the difference between mark-up and gross profit margin.

• Mark-up is the amount added to the buying price to determine the selling price. Mark-up can be expressed as a dollar amount or as a percentage of your buying price.

• Gross profit margin is the percentage that gross profit is of the sales. It tells you what percentage of your sales is available to cover your expenses and give you a profit. Operating expenses after calculating your gross profit, your next step is to calculate your operating expenses. Operating expenses are expenses that a business incurs in its day-to-day operation. Some examples of operating expenses include:

• accounting fees

• advertising

• power

• rent

• vehicle expenses

• wages

• insurance

• telephone

• maintenance.

Net profit

Now you can calculate your business's net profit by subtracting operating expenses from your gross profit. This is calculated in a profit and loss account. The profit and loss account is a financial report showing the gross profit, from the trading account, less the operating expenses to produce a net profit for the period.

15.4 Factors to Be Considered While Fixing Selling Price

Pricing refers to decision on the price to be charged for selling products to customers. There are four main considerations in the pricing decision. These are:

- Pricing objective
- Customers' willingness and capacity to pay
- Costs of manufacturing and selling the product
- Competition

Pricing objective refers to how the pricing needs to contribute to the total approach to marketing that product. Pricing objectives are often associated with two distinct pricing strategies - penetration price and skimming price. Penetration price aims at penetrating market to establish a long-term dominance in the market. For this purpose, it is better to keep the product price low to prevent competitors to erode your position. In skimming price the focus is on short term gains rather than long-term market dominance. So skimming price, like skimming cream from top of milk, aims at making maximum profit in initial stages when there is no competition, and leaving the market open to the competition at later stages.

Customer's willingness and capacity to pay has major impact quantity of sales possible at different prices. A company must take this into account and decide what combination of price and sales volume result in maximum profit for the company.

Cost of manufacturing and selling the product is another important factor in pricing. In fact some companies may base their prices solely on the cost. However as cost per unit manufactured tends to vary with the volume of production and sale, it is better to try and fix a Price that gives maximum profit taking into consideration both demand and cost behavior.

The most tricky factor in pricing decision is the nature of competition existing and the likely response of competitors. Some companies fix their price solely in relation to the competitors price, but this again is not likely to be very good approach except for commodity products with many competitors.

1. Your Costs

If your rate doesn't include enough just to break-even, you're heading for trouble. The best thing to do is sum up all your costs and divide by the number of hours you think you can bill a year. Whatever you do, DON'T think you can bill every hour. You must account for sick days, holidays, hours working on the business, hours with no work and so on.

Also make sure you factor in all the hidden costs of your business like insurance, invoices that never get paid for one reason or another, and everyone's favourite - taxes.

2. Your Profit

Somewhat related to your costs, you should always consider how much money you are trying to make above breaking even. This is business after all.

3. Market Demand

If what you do is in high demand, then you should be aiming to make your services more expensive. Conversely if there's hardly any work around, you'll need to cheapen up if you hope to compete.

Signs that demand is high include too much work coming in, other freelancers being overloaded and people telling you they've been struggling to find someone to do the job. Signs that demand is low include finding yourself competing to win jobs, a shortage of work and fellow freelancers re-entering the workforce.

4. Industry Standards

It's hard to know what others are charging, but try asking around. Find out what larger businesses charge as well as other freelancers. The more you know about what others are charging and what services they provide for the money, the better you'll know how you fit in to the market.

5. Skill level

Not every freelancer delivers the same goods and one would expect to pay accordingly. When I was a freelancing newbie I charged a rate of $25 an hour for my design, when I stopped freelancing recently my rate was $125 an hour. Same person, but at different times I had a different skill level and hence was producing a different result. Whatever your rate, expect it to be commensurate with your skill.

6. Experience

Although often bundled with skill, experience is a different factor altogether. You may have two very talented photographers, but one with more experience might have better client skills, be able to foresee problems (and thus save the client time and money), intuitively know what's going to work for a certain audience and so on. Experience should affect how much you charge.

7. Your Business Strategy

Your strategy or your angle will make a huge difference to how you price yourself. Think about the difference between Revlon and Chanel, the two could make the same perfume but you would never expect to pay the same for both. Figure out how you are pitching yourself and use that to help determine if you are cheap'n'cheerful, high end or somewhere in between.

8. Your Service

What you provide for your clients will also make a big difference to your price tag. For example you might be a freelancer who will do whatever it takes to get a job just right, or perhaps you are on call 24-7, or perhaps you provide the minimum amount of communication to cut costs. Whatever the case, adjusting your pricing to the type and level of service you provide is a must.

9. Who is Your Client

Your price will often vary for different clients. This happens for a few reasons. Some clients require more effort, some are riskier, some are repeat clients, some have jobs you are dying to do, some you wouldn't want to go near with a stick. You should vary your price to account for these sorts of factors.

15.6 Matching costs with sales

In accrual accounting, the **matching principle** states that expenses should be recorded during the period in which they are incurred, regardless of when the transfer of cash occurs. Conversely, cash basis accounting calls for the recognition of an expense when the cash is paid, regardless of when the expense was actually incurred.

If no cause-and-effect relationship exists (*e.g.,* a sale is impossible), costs are recognized as expenses in the accounting period they expired: *i.e.,* when have been used up or consumed (*e.g.,* of spoiled, dated, or substandard goods, or not demanded services). Prepaid expenses are not recognized as expenses, but as assets until one of the qualifying conditions is met resulting in a recognition as expenses. Lastly, if no connection with revenues can be established, costs are recognized immediately as expenses (e.g., general administrative and research and development costs).

Prepaid expenses, such as employee wages or subcontractor fees paid out or promised, are not recognized as expenses; they are considered assets because they will provide probable future benefits. As a prepaid expense is used, an adjusting is made to update the value of the asset. In the case of prepaid rent, for instance, the cost of rent for the period would be deducted from the Prepaid Rent account.

The matching principle allows for a more objective analysis of profitability. By recognizing costs in the period they are incurred, a business can see how much money was spent to generate revenue, reducing "noise" from timing mismatch between when costs are incurred and when revenue is realized.

15.7 Billing procedure – cash and credit sales

Credit and Collections strategies, if properly applied can help firms reduce Accounts Receivable (AR) balances and generate a substantial one-time cash flow. In this challenging economy some customers will delay payment for as long as they possibly can do so. In other cases invoices are not paid on time because there is some form of issue that must be addressed before payment will be made. Your task is to apply payment pressure without creating undue friction that can negatively impact customer relations.

Accounts Receivable is one of the largest and most liquid of corporate assets. Unfortunately effective management of the process is still often wrongly seen as being part of accounting and therefore as a cost center.

Many organizations view credit and collections as a necessary evil designed to protect against bad debts. In actual fact credit and collections should be an integral part of the sales process; helping establish an initial framework for a long and mutually beneficial relationship between buyer and seller and completing the final step in the sale-to-cash cycle.

If viewed from this perspective, credit and collections becomes a sales enhancement function and a profit center, not an administrative cost center that inhibits the sales process.

Credit and collections management is a fundamental part of Customer Relationship Management and you must apply payment pressure in line with a formal strategy rather than just trying to be tough on every customer.

Why is Credit and Collections Important?

Cash flow drives every business. If you cannot turn an invoice into cash in a timely manner, then you are going to have to find an alternate source of cash to fund your operations. That's why people use the term order-to-cash. Credit and collections is the last step in this critical cycle. As long as an invoice hasn't been paid there is no sale!

Now let's give you a very simple example to demonstrate the importance of credit and collections. As we have alluded to above, this is a very challenging economy. Although a customer may be given payment terms of Net 45 days (as an example), they will adjust the terms in their Accounts Payable application to Net 60 and in many cases even more.
If you were to work with your customers to encourage them to pay you just a little bit sooner, a modest 3-day reduction in receivables for a $10 million firm will generate a cash flow of $82,000! The potential speaks for itself. The question now becomes one of creating a strategy

and appropriate tactics to empower your employees who are in charge of your credit and collections initiatives.

Major Components and Goals of Credit and Collections

In most cases the credit-to-cash function can be broken down into four major components:

- Credit/sales approval
- Billing
- A/R management (what some erroneously call "collections")
- Monitoring and improvement

Each component must have a goal which compliments the purpose of the credit-to-cash function itself.

Credit/Sales Approval

If the purpose of credit is to secure profitable sales which would otherwise be lost, then it follows that the goal of the Credit/Sales Approval process should be to seek ways to say yes while being confident of payment. In some cases a substantial investment is made to guide the customer to the point where they want to buy. It's such a waste to then look for reasons to reject the sale or to quite possibly alienate the customer to the point where they will reject you.

- Wrong Message: The credit approval process has at times been described as finding ways to say "no" and the credit department has been referred to as the sales avoidance department. Considering that the credit people are being told, via performance measurements, that risk avoidance is the goal; it's surprising that any customer gets approved.
- Right Message: The goal of the credit approval process should be to maximize sales opportunities wherever possible while minimizing risks. Working to find ways of saying "yes" to every possible sale while remaining confident of payment better complies with the sales support mission.

Most people treat credit approval as a fixed point in time with a fixed set of operating characteristics. Once a prospect has overcome all of the credit approval hurdles that inhibit their desire to place an order (we can really make the simplest of acts incredibly complex), they are assigned a credit limit that in most instances acts more as a deterrent to new business than a protection against increased risk.

- If a customer likes your products/services and wants to order more than either party had originally anticipated, the credit limit places a temporary cap on their ability to do business with you. What's wrong with this picture?
- If you are operating below capacity or are trying to sell off excess inventory, the only expenses that matter are the variable costs of production (product acquisition). The actual profit margin for these incremental sales is therefore higher, sometimes substantially higher. In order to fill this excess capacity you can adopt very aggressive pricing models and/or

relaxed credit terms. The write-off rate may be higher, but the incremental profit more than makes up for the added risk. This concept is called "Product Value at the Time of Sale" and works for any type of business with excess capacity.

One last comment should be made before we move forward. If A/R Management is in fact a sales support function, then the people working in this area may need to adopt a different attitude. Credit is not a privilege offered to only the few. Prospects and customers should not be made to jump through hoops in order to do business with you. Customer contact to discuss overdue invoices should be a positive experience where buyer and seller are working together to achieve a mutually beneficial relationship. In short, A/R Management personnel should be well versed in the fine art of selling.

Billing

Companies sell products in order to generate revenue. That revenue cannot be turned into cash until two key milestones have been reached: the customer must receive the invoice and the invoice must be approved for payment. Therefore the purpose of the billing process is to facilitate payment.

It may not sound like a significant problem, but let's look at an example where it takes three days to generate an invoice. Let's also say that this company generates $20 Million in annual revenue. That's $100,000 in revenue per day. Therefore for every day that an invoice is not completed and mailed a company must invest an additional $100,000 in receivables. Looking at it the other way round, for every day a company can reduce the time required to actually generate and mail an invoice they will receive a one-time cash flow of $100,000.

The invoicing function is a critical link in the order-to-cash cycle. At a minimum companies should

- monitor and reduce the time required to generate a typical invoice and
- monitor and reduce invoice defects (format, pricing, terms, etc.).

A/R Management

A/R Management is not "collections", the enforcement of payment. Collections is what collection agencies and attorneys do, and they deal with "debtors", not customers.

A/R Management is "the completion of the sale". The goal is to keep customers current and buying and in the process achieve one of the most important underlying goals: the stimulation of repeat sales. The last thing smart companies want to do is create an impediment to lucrative repeat business.

The purpose of A/R Management is keeping credit customers current. The benefit is enhanced cash flow. The secondary purpose of A/R Management is the early identification and control of the small percent of business that represents a potential for loss.

Monitoring and Improvement

The last and most important component of credit management is the process of continuous improvement. Goals need to be established. Information needs to be generated to compare actual results against the established goals. This then leads to the identification of opportunities for improvement and the creation of specific steps to either overcome the identified problems (that's the reactive approach) or take advantage of the new opportunities (that's the proactive approach). Finally, the circle is closed as new goals are established and information gathered to monitor the revised processes.

Please keep in mind that this is both an internal and external process. The internal component is an analysis of the efficiency and effectiveness of business processes themselves as well as individual employees (or work groups). Efficiency is tied to the cost of a business process (or one of its components), while effectiveness is tied to whether the specified goals are being achieved.

You could spend great quantities of cash to make a business process work, but that would not be cost effective. Conversely you could make the business process less costly and not achieve the goals of the process. Somewhere between these two extremes is the best suited path and that path will depend on your industry and the way you have decided to run your business.

Having said all of this, what then needs to be measured and why? The following list is certainly not all inclusive but intended to help establish a framework to help measure efficiency and effectiveness.

- Payment Terms: Cash flow can be impacted if payment terms are too liberal. While more lenient payment terms may be a reflection of competitive realities, they may also be used as a quick fix to gain business.
- Invoicing Delays: If there is a delay between the time an order is shipped or a service provided and the invoice date, this may be an opportunity for improvement. Users should track both the average delay (general improvement) as well as investigate billing delays for specific invoices that exceed a specified limit (specific improvement).
- Procedural Errors: The failure to meet a customer's business process requirements (Purchase Order number, invoice formats, pricing, even number of invoice copies) will lead to payment delays. These procedural errors need to be segregated by type, tracked, and continuously improved.
- Service Disputes: If a customer does not pay on time due to an identifiable dispute/problem (goods or services are not provided on time, poor quality, or any other reason that can be tracked), cash flow will be negatively impacted. These specific problems need to be resolved as quickly as possible (another measurement standard) and they need to be tracked over time to determine if general improvement is being achieved. When an invoice is disputed, a

specific dispute type needs to be assigned. Each dispute type (both instances and value) need to be monitored.

- Average Days Late: DSO (Days Sales Outstanding) is relevant to cash flow forecasting, but not A/R Management simply because it (DSO) is not tied to the payment terms you can elect to offer customers. Average Days Late (ADL) measures a customer's payment history as it relates to the payment terms offered for each invoice. If a customer's ADL is increasing or is higher than average, this should be a trigger to contact the customer, not about a specific invoice, but their payment history in general. ADL may also indicate that a specific A/R rep is not quite as effective as they could be (when compared against other A/R reps). Finally, a customer's payment history should be one of the factors sales people consider when discussing future pricing with customers.

Improving the Credit and Collections Process

We have hinted above that there are certain aspects of the credit and collections process that need to be monitored and improved to minimize the funds tied up in Accounts Receivable. While it is not possible for every customer to pay every invoice on time, there are some very specific steps you can take to optimize AR balances and the credit and collections process.

Step 1: Remove all Impediments to Payment

Your first credit and collections strategy is the removable of any impediment to payment. Your order-to-ship business processes cannot be allowed to stand in the way of payment. You could call this a mini business process improvement opportunity. Whatever you call it, adopt credit and collections strategies and tactics that give your customers no excuse to delay payment. Think about it for a moment. How many days can be lost if you fail to give customers exactly what they need to immediately approve your invoice for payment. If you are a $10 million firm, each day's delay represents $27,000 in cash flow.

Look at some of the credit and collections strategies listed below. How many could be improved in your business?

- Ship/provide acceptable products and services (no returns, no questions).
- Make sure the invoice format is acceptable. If the customer requires an invoice format that is different from your "standard" invoice format, this will require that your ERP system gives you the ability to assign a specific invoice format to each customer.
- Bill what you quote.
- Create a method by which all quotations are saved and easily retrieved by AR personnel to avoid any delay should the customer challenge the prices or rates you have billed.
- Include appropriate documentation. This implies that the invoicing system knows that specific documentation is required by the customer and the person creating the invoice knows where to get it easily so it can be included in the invoice packet.

- Reduce the time it takes to create and send invoices. In some instances this can be a substantial delay. This is an ideal mini process improvement opportunity.
- Make sure you have the correct Bill-To information. This is particularly true for the addition of new customers but also keep in mind the fact that the customer's bill-to person can leave and you have to determine their replacement quickly.
- If a customer requires additional invoice copies, send them with the original invoice. Again this is something the invoicing system and the person creating the invoice need to know.
- Send interim bills whenever possible. This is particularly true for service oriented businesses. If the value of a project is going to be substantial, negotiate with the customer some form of interim billing. Similarly if a project is going to cover the purchase and subsequent installation of a high value machine, negotiate a contract whereby you bill for the machine when delivered.
- Transmit invoices electronically or use priority mail for high value invoices. The objective here is to get the invoice in the hands of your customers as quickly as possible.
- Resolve disputes immediately. If the customer challenges an invoice, resolve this dispute as quickly as possible.
- Track the reason why each invoice was not paid on time. If you do not monitor why invoices are not paid on time, you cannot launch appropriate steps to improve your performance.
- Document the steps you take to improve each impediment and create graphs to track your performance in each area.

Step 2: Implement an Appropriate Credit and Collections Strategy

Credit and collections is an integral part of your total customer relationship strategy. You cannot adopt one strategy for all customers and you certainly should not adopt adversarial tactics that put undue pressure on your customers. Instead you want your customers to want to do business with you, even if they know they are paying you later than you want.

You have to decide when to contact customers and more importantly what credit and collections approach you are going to use. If you start the credit and collections process too soon, you might negatively impact the relationship you have with your best customers. If you wait too long, you may be investing funds in Accounts Receivable (AR) that are desperately needs elsewhere.

- Extend credit (time) to your best (most profitable) customers.
- Contact habitually late customers sooner.
- The underlying objective of any credit and collections strategy is changing a customer's payment behavior. If you do nothing to change this behavior, then you just perpetuate the problem every time you send them an invoice.
- Make sure management and your sales team buys into your credit and collections strategies.

- All collections activities should be an integral part of your larger customer relationship management (CRM) strategy.
- Make sure members of your credit and collections staff understand how they should conduct themselves.
- Devise management oversight procedures. This is particularly useful when monitoring the success of each credit and collections staff member. You might find that specific individuals may not be doing quite as well as others.

Step 3: Adopt Effective Credit and Collections Tactics

Having devised an overall strategy and enlisted organizational support, what should you do specifically to achieve your credit and collections objectives?

- Keep in mind the fact that each time you *touch* a customer there is a cost associated with that contact. Your overall objective is to optimize the cost per dollar collected.
- Statements and dunning notices are low cost touches as long as customers respond. For those that do not respond, a phone call may be the best first contact. This of course requires that you track each customer's response so you know who responds to what credit and collections tactic. If a customer does not respond to dunning notices or statements, it makes no sense to waste your valuable time on these fruitless activities.
- Dunning notices should list each invoice, the total outstanding and an expected pay date. If possible the dunning notice should contain text asking for payment while at the same time thanking the customer for their business. This carrot and stick approach is more effective than a notice that appears to be blunt and forcing.
- Don't use the same trigger point (e.g. 60 days overdue) for all customers. Good customers who pay their bills on time and generate substantial gross margin should be contacted less often than customers who are less "profitable".
- Try to adopt a positive credit and collections approach until it become quite clear that a more forceful attitude is required.
- If possible always contact the same person.
- If there is some impediment to payment, take immediate steps to resolve this specific issue and then take steps to prevent this issue from occurring in the future.
- Don't be afraid to ask for payment 7 – 14 days sooner. Most of your customers are using some form of accounting software or ERP software and it's likely that they are setting payment terms within their Accounts Payable system that does not match the payment terms you have negotiated.
- There is no incentive for the customer to do anything unless you ask for an action (invoice approval, payment, etc.) by a specific date and follow up accordingly.

- Once you close a call, follow up immediately via e-mail (thanking the customer for their anticipated payment, the action that has been agreed will be taken, the due date this action was promised, and of course your call back date). All of this information is required so that the customer is given no real opportunity to take no action. If the customer does not meet the actions agreed upon, this information can be used when you next contact them.
- In some instances a forceful attitude is the only language people understand.
- Monitor payment history (Average Days Late, Not Average Days to Pay) and be ready to react swiftly. Average Days Late is the key credit and collections measure because it relates to what payment terms you have negotiated with the customer. In some instances sales people might offer more lenient payment terms to close a particularly important sale. Average Days to Pay just measure how long it takes for a customer to pay based on the original invoice date. It's good for cash flow forecasting, but has no relevance to credits and collections activities.
- Encourage prompt payment in the future by saying "Thank You" when you receive payment.

Credit and Collections Software Applications

If your credit and collections tactics are entirely manual, obviously the process itself is very inefficient. Small to mid-sized accounting systems only support an Aging Report as the primary credit and collections tool, and it's unlikely that there is a third party product that supports credit and collections. If your current accounting system doesn't support any form of software supported credit and collections application, you can use your contact manager to support your credit and collections activities.

Since the Aging Report contains a list of all unpaid invoices, you might want to use your accounting system's report writer to display a list of only those invoices that are X days overdue. Review this list and create an action in your contact manager for each of your customers that need to be contacted. Then you can at least track your efforts and send customers appropriate e-mails depending on where they are in the credit and collections process. Once a customer pays, you can "complete" the action that you created to track this specific overdue invoice.

Most higher-end accounting and ERP systems do support some form of credit and collections functionality, but the "quality" of the applications will vary significantly. Some systems just support the creation of an alert to let you know that a customer has an overdue invoice. That's at least a start, but you can do more.

The ideal credit and collections application is in fact a highly specialized contact manager.

- The system can be programmed to notify you when an invoice is overdue using a trigger point (x days overdue) specified for each customer.

- If you are going to send statements and dunning notices, you can program these activities into your credit and collections application on a customer by customer basis. Of course these activities will occur automatically and should be added to the contact record for each invoice.
- If a personal call is the next step in the credit and collections process, the planned call will be automatically placed into your credit and collections contact manager.
- If you are a larger firm with multiple people involved in credit and collections, the system would assign the call to a collector assigned to that customer or region.
- The credit and collections application should contain the names of all appropriate customer contacts (keeping in mind the fact that the people you are going to call are probably not the people who will be called regarding sales and marketing).
- When you make the call all of the information relevant to each overdue invoice is one click away (including sales order details).
- All of the information regarding the customer's past payment history is available.
- If a customer has multiple overdue invoices, you can see each invoice and automatically copy contact details to each invoice. This is particularly effective when the objective of your call is securing payment for a number of invoices rather than a single or limited number of invoices. As an example if the customer has 20 overdue invoices totaling $25,000, the objective might be securing a $20,000 payment.
- You can take notes regarding the call.
- You can assign a next contact date.
- If the invoice needs to be escalated, the credit and collections application will allow you to transfer the responsibility to another person. This transfer process could also be utilized to cover vacations and other absences.
- Once an invoice has been paid, the credit and collections application will automatically delete the next planned call relating to that invoice.
- Credit and collections specific histories will be available so you can more effectively plan your credit and collections strategies and tactics.

This list of activities is just a summary of what's possible when your credit and collections efforts are software supported.

Searching for a New Accounting System or ERP System?

If you are contemplating the purchase of a new accounting system or ERP system, keep in mind the fact that a software supported credit and collections application can help you reduce your Accounts Receivable (AR) significantly. If you are a $50 million organization and credit and collections is an issue (AR is way too high), a slight reduction in AR (say 3 days) has the potential to generate a one-time cash flow of $135,000. Since you will need to justify the

investment in a new accounting system or ERP system this cash flow can be used to reduce the Total Cost of Ownership of the contemplated accounting or ERP system.

If you are in the process of selecting a new accounting or ERP system (or might do so at some point in the near future) you might want to contemplate the use of a software selection tool like *The Accounting Library*. As you are defining your functional requirements, you can specifically search for a system that features software supported credit and collections.

15.8 Cashier's Sales summary sheet

Methods of order taking: essentially there are four methods of taking food and beverage orders from customers.

Triplicate	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 waiter as a means of reference during service
Duplicate	Order is taken; top copy goes to the supply point; second copy is retained for the service and billing purpose.
Service with order Pre-ordered	Order is taken; customer is served and payment received according to that order; e.g. bar service or take-away methods 1) Individually, e.g. room service breakfast 2) Hospital tray system 3) functions

All order taking methods are based upon these four concepts. Even the most sophisticated electronic system is based upon either the duplicate or triplicate methods even though the actual checks may not be written but communicated electronic to VDUs or print out machines.

TRIPLICATE CHECKING SYSTEM

This is a control system used in the majority of medium and large first-class establishments. As the name implies the food check consists of three copies.

To ensure efficient control the waiter or waitress must fill in the information required in the four corners of the check, this being:

•Table number
• Number of covers
• Date
• Signature of waiter/waitress taking the order

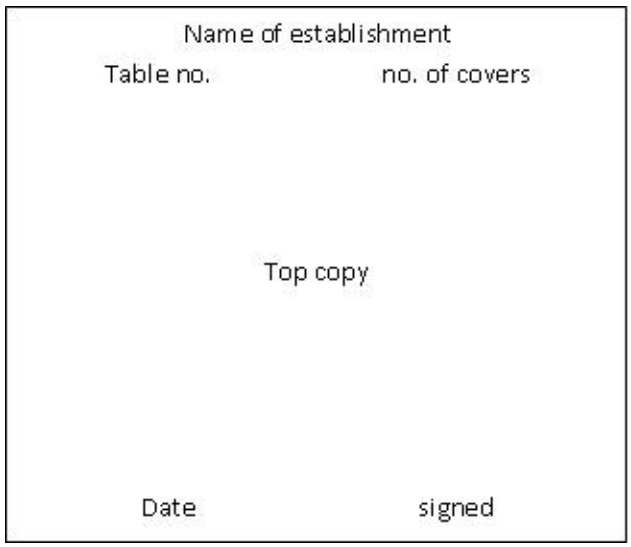
The first kitchen order ticket goes to kitchen and is received by aboyer who shouts the order to various sections for preparation of items and puts up spike in chronological order of table numbers. After the pickup of dishes kitchen order tickets are puts up in a kitchen order ticket box (locked) and taken out for making production and consumption sheet and later sent by the chef to food and beverage control department for comparative analysis.

The second kitchen order ticket is given to restaurant cashier. He prepares the sales summary sheet on the basis of that. The guest check is presented to guest for settlement either by cash or credit. The sales summary sheet is sent to front office clerk for making entry into various books like cash book, guest folio, city ledger etc. only kitchen order tickets and vouchers are sent to food and beverage control for comparative statements.

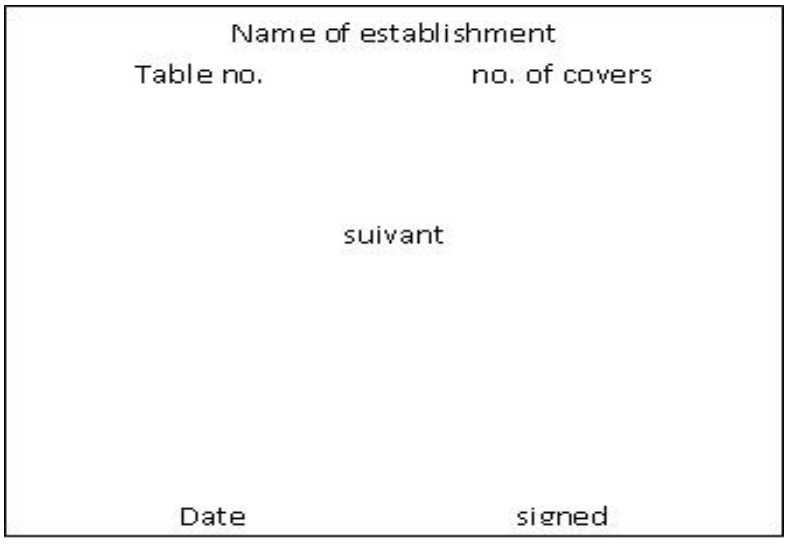
The third kitchen order ticket is used by the steward for pickup purpose as well for preparing guest voucher. Abbreviations may be used when taking the order as long understood by everyone and not misinterpreted by the kitchen causing the wrong order to be put up, and therefore a delay in the service to the guest.

THE FOOD CHECK:

1) The top copy of the food order goes to the kitchen and is handed to the aboyeur at the hotplate
2) The duplicate goes to the cashier who makes out the guest's bill
3) The flimsy, or third copy, is retained by the waiter at his/her sideboard as a means of reference
Any checks or bills which have to be cancelled should have the head waiter's or supervisor's signature on them; so also should checks and bills which have alterations made on them.

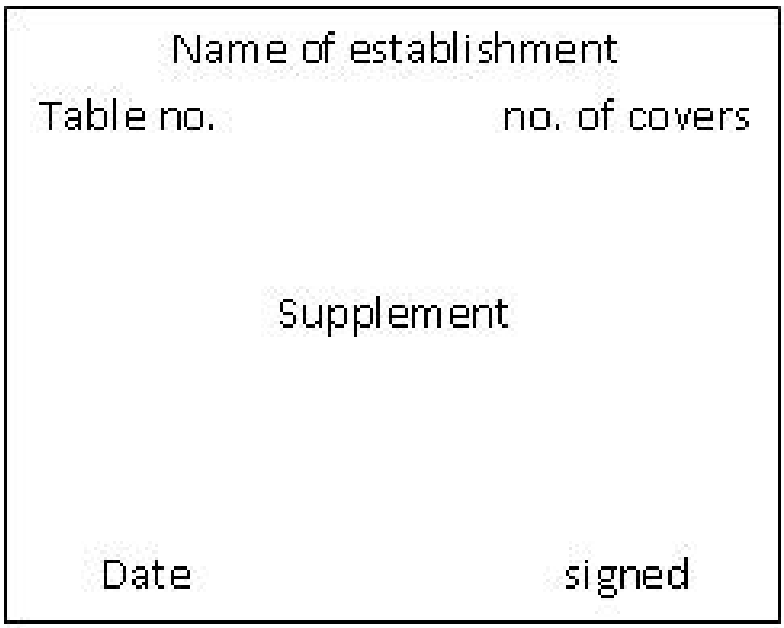


In certain instances it is necessary to write out special checks. These would be as follows:
• Where it is necessary to write out more than one food check for a meal, e.g. where a sweet check is written out after the first and main course has been served. At the head of this check should be written the word Suivant which means the 'following' check, and shows that one check has already been written out for that particular table



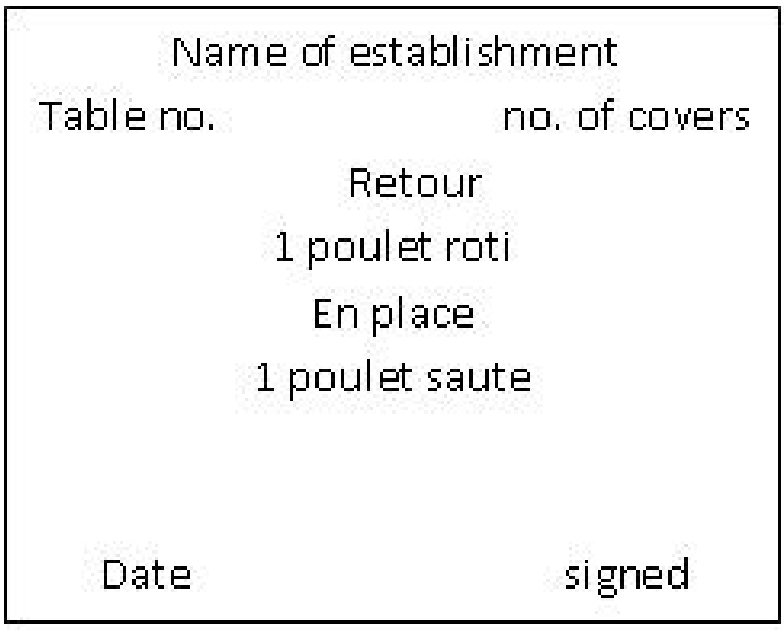
Suivant Kot's

• When an extra portion of food is required because sufficient has not been sent from the kitchen, a special check must be written out headed Supplement. This means to 'supplement' what has already been previously sent. It should be signed by the head waiter or supervisor and normally there is no charge (n/c), but this depends on the policy of the establishment concerned



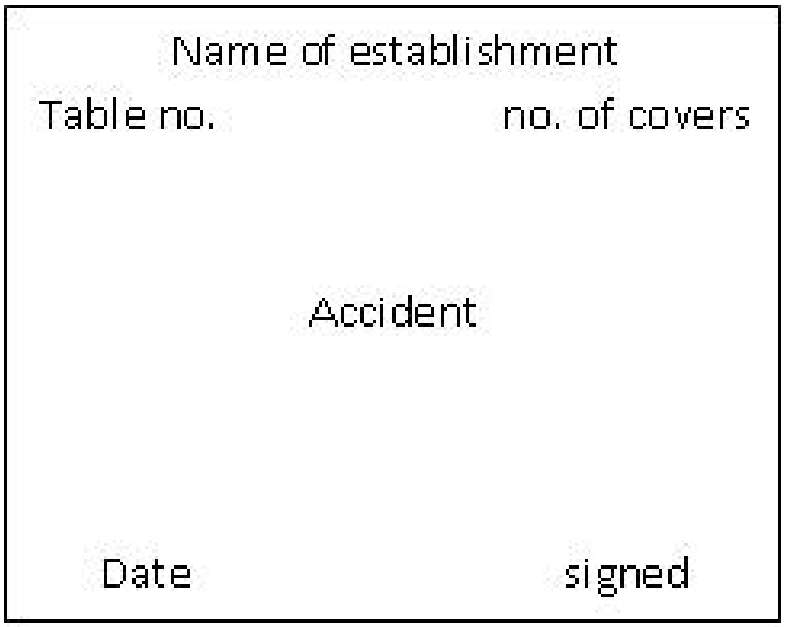
Supplement Kot's

• Where a wrong dish has been ordered and has to be sent back to the kitchen and replaced, a special check must again be made out. If the service being carried out is from an a la carte menu then the prices of the two dishes concerned must be shown. Two main headings are used on this special check, Retour, or 'return' and the name of the dish going back to the kitchen, and En place or 'in its place', and the name of the new dish to be served



Retour Kot's

• It is occasionally happens that the waiter or waitress may have an accident in the room and perhaps some vegetables are dropped. These must be replaced without any extra charge to the guest. Here a check must be completed headed accident. It will show the number of portions of the vegetables required and should be signed by the head waiter or supervisor in charge. No charge(a/c) is made



Accident kot's

With modem day trends towards 'covered' dishes being presented to customers at the table it is increasingly important to identify specific orders before placing them on the table in front of the appropriate person.
A system for ensuring that the right customer receives the correct food without the constant lifting of dish covers is to identify on the order which customer is having which dish. A check pad design which might be used for this. The covered dishes are then lettered at the hotplate prior to leaving the kitchen.

DUPLICATE CHECKING METHOD

This is a control system which is more likely to be found in the smaller hotel, popular price restaurant and cafes and department store catering. It is generally used where a table d'hote menu is in operation and sometimes a very limited a la carte menu.

As the name implies, there are two copies of each of these food checks, each set being serial numbered. A check pad, or bill pad as it is sometimes termed, usually contains a set of 50 or 100 food checks. The top copy of the food check is usually carbon-backed but, if not, a sheet of carbon must be placed between the top and duplicate copy every time a fresh order is taken.

For control purposes the top copy may have printed on it a waiter’s number or letter. This should be the number or letter given to a waiter on joining the staff. The control and accounts department should be informed of the person to whom the number applies, and he/she retains it throughout employment. Also on each set of food checks should be printed a serial number

The top copy of the set of food and drink checks is made up of a number of perforated slips usually 4-5 in number. There is a section at the bottom of the food and drink check for the table number to be entered. The top copy sometimes has a cash column for entering the price of a meal or the dishes ordered but, if this is not the case; the waiter must enter them independently on to the duplicate copy against the particular dish concerned.

When writing out a guest's order a different perforated slip should be used roc each course. The waiter must remember to write out the number of covers arc the price of the meal or dish concerned on each slip. Before sending each slip to the hotplate see that the details are entered correctly on the duplicate copy together with the price. Since the duplicate copy acts as the guest's bill, the waiter must ensure that everything served is charged and paid for.

As the service of a meal commences, the waiter tears off from the top copy of the food and drink check the perforated slip showing the first course ordered, this is taken to the hotplate and the required dish is put up. As soon as this happens the aboyeur will tear off the waiter's number (21) on the end of the slip and place it with the dish concerned. This then shows which waiter the dish is for. If there is no waiter number at the end of the perforated slip, then the perforated slip itself is left with the order until collected by the appropriate, waiter. The aboyeur will then retain the slip showing the course just served. As soon as the first course is served and allowing time for this course to be consumed the second perforated slip is taken to the hotplate by the waiter. This dish will then be collected as required. This same procedure is carried on throughout the meal. It may happen that there are insufficient perforated slips on the top copy of the food and drink check for a particular guest's requirements. Very often the waiter does his/her own drink service and thus takes the drink order and enters it on a separate perforated slip. When there are not sufficient perforated slips, a supplementary check pad is brought into use. This pad is made up of single slips on which the waiter writes the order and the number and then collects the items concerned from a particular service point. He/she must ensure that the charge for such items is entered on the guest's bill, that is, the duplicate copy of the food and drink check.

serial no.	Waiter's no.		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
693	21		
table no. ---------- Date------ total	Rs.		

Duplicate Kot

Other checking methods-As has already been mentioned, there are many variations to the basic duplicate checking control system. These are too numerous to mention. Individually but two are described below very simply in order to give some idea of the possible variations available.

SINGLE ORDER SHEET

A further simple form of checking. This may be used in cafes, quick turnover restaurants and department stores. A simple form of control such as this may also be used, or adapted for use, in various forms of take-away establishments. The menu is normally very limited with little or no choice. The waiter takes the order and marks down the guest's requirements, calls for the order verbally over the hotplate and, when the guest requests the bill, prices the order sheet and hands it to him/her. The guest then hands it to the cashier on leaving and pays the required amount. There is only one copy of this order and bill combined and this is retained by the cashier, for control purposes, once the guest has made the necessary payment.
In conclusion, it must be remembered that control in one form or another is all important, the final method of control used depending upon the policy of the establishment concerned. No system is foolproof but, if sufficient care and caution is observed, any loss will be cut to a bare minimum.

waiter		table no	no. of pax	
				rs
wimpy	cheese burger	egg burger	bender roll	chicken bun
king size	quarter pounder	sandwich	momos	ketchup sachet
grill	special grill	Veg. burger	bacon	ham
bean burger	bacon in bun	bacon and egg in bun	eggs	egg chips
miscellaneous				
roll	butter	whipped cream	breakfast 1/2/3	chips
apple pie	childs meal 1/2/3	tea cakes	orange juice	coke
beverages		ice creams		
tea	chocolate	ice-cream	brown derby	choco nut
coffee	perc coffee	thick shake	fruit Sunday	black forest
milk		sodas	banana boat	strawberry sundae
				rs

SINGLE ORDER SHEET

RESTAURANT SALES SUMMARY SHEET											
ABC RESTAUTRANT											
DATE					CASHIER.....					SC ROLL NO.....	
SHIFT&TIME										VOUCHER Nos....01-10	
MEAL											
S. NO.	VOUCHER NO.	KOT Nos	STEWARD'S NAME	AMOUNT	SALES TAX	LUXURY TAX	DISCOUNT	SERVICE CHARGE	AMOUNT		REMARKS
									CASH	CREDIT	
CASH RECEIVED.....								SIGNATURE OF CASHIER.....			
NO. OF CASH VOUCHERS.....								SIGNATURE OF FRONT OFFICE CASHIER.....			
NO. OF CREDIT CARD VOUCHERS.....											

Sales Summary Sheet

Menu and customer bill

This shows the menu order and customer's bill combines on one sheet and would be allocated to each of the guest's requirements would be written down in the column next to the price column.How to Settle Guest Bill in Restaurant: As you know after finishing meal guest calls for bill. Generally at first captain or head waiter takes order and so after finishing meal they take and settle bills. In many restaurants general waiter settle bills.

Basic Steps:

1. Guest calls for bill
2. Waiter goes to the cashier and instructs him to total the check by the table number.
3. Cashier calculate and totals the guest check including service charge and hands the check to the waiter.
4. Waiter double checks the bill and places it in the check folder.
5. Waiter approaches the table and stands straight to the right of the guest and presents the bill in the folder.
6. Waiter waits for the guest to examine the guest check.

When Guest Pay in Cash:

1.Verify the cash tendered by the guest.
2.Waiter takes bill and cash to the cashier.
3.Cashier returns any change due (to the guest) with the receipt to the waiter.
4.Waiter verifies the change returned by the cashier.
5.Waiter gets authorized signature form Manager or his assistant (If applicable)
6.Waiter returns change, receipt to the guest.

When Guest Pay by Credit Card:

1.Request the guest to sign to the check and obtains the credit card.
2.Waiter takes credit card and signed check to the cashier.
3.Cashier checks the credit card for expiration date.
4.Cashier obtains approval code.
5.Cashier imprints credit card on respective voucher and the guest check.
6. Cashier lists the amount on the guest check on the credit card voucher and also the guest check number.
7.Cashier returns guest check, credit card and voucher to the waiter.
8. Waiter presents guest check, credit card and voucher to the guest, requesting his signature on the credit card voucher.

9. Waiter discreetly checks the checks the guest's signature against the signature on the back of the credit card.

10.Waiter returns the credit card to the guest.
11.Waiter gives the guest copy of the signed credit card voucher to the guest.

When Guest want to charge to guest room:

1. If guest wants to pay with his room charge, then politely requests the guest to write the room number and name in the apace provided on the check.
2.Request the guest to sign the check on the line provided.
3.Verify the check of its legibility and returns the check to the cashier.
4. Obtain verification of guest's name and room number by requesting the guest for his/her room key and checks it with cashier against house list.

15.9 Summary

Sales control involves an evaluation of all marketing efforts with reference to predetermined standards of performance. Like any other control system, sales control requires the establishment of standards, the evaluation of actual performance and the correction of deviation in performance. Sales control implies not only managerial action with regard to actual sales, but it also embraces all other marketing functions required for the even flow of products or services form producers to consumers

15.10 Question

1. What is the ways of expressing selling?
2. How you determining sales price?
3. What is the procedure of Calculation of selling price?
4. How many factors to be considered while fixing selling price?
5. How you matching costs with sales?
6. What is Billing procedure – cash and credit sales in hotel industry?
7. Write a short note on Cashier's Sales summary sheet?

15.11 Reference

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UNIT 16

INVENTORY CONTROL

Structure

16.1. Introduction

Inventory may be defined as the goods held for eventual resale by the firm and connotes the value of: raw materials, work -in- progress and finished goods, and ***Inventory control is the process of maintaining inventory items at a desired level to meet the requirements of the business.***

16.1.1. Objectives of Inventory Management:

1. To maintain an adequate supply of materials to meet the requirements of the business.
2. To achieve maximum efficiency in production & sales with minimum investment in the inventory.
3. To facilitate purchasing.
4. To establish stock levels.
5. To determine rate of stock turnover.
6. To identify flow of items.
7. To avoid the problem of over and under stocking as well as running out of stock.
8. To prevent wastage, pilferage and spoilage.
9. To prevent fraud.
10. To provide data for management reporting.

16.2. Inventory control cycle based on 6 key steps

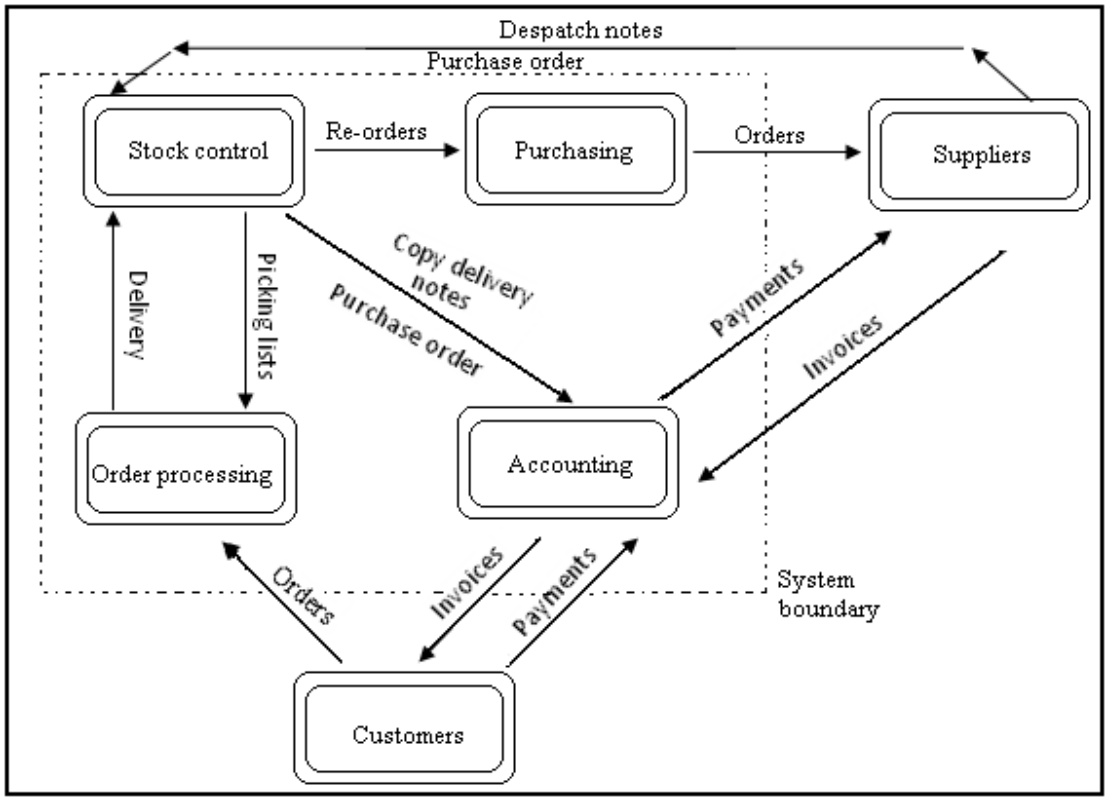

Fig: Inventory Control Cycle

16. 3.Techniques / Methods of Inventory Control

1. Setting of stock levels.
2. Determination of EOQ
3. ABC Analysis
4. Use of Stock turnover ratio (inventory turnover ratio)
5. Use of Perpetual Inventory
6. Use of Monthly Inventory
7. Pricing of requisitions (material issues)

16.4. Stock Level

The level at which an item of stock is to be held in stores/cellars at any point in time of the business in a particular trading period.

Determinants of stock levels

1. The forecasted usage figures for the trading period.
2. The economic ordering quantity (EOQ).
3. The reordering time for the item (lead time).
4. The rate of stock turnover
5. The budget available.
6. The market trends.
7. The storage space available.
8. The shelf life of the item.

Minimum stock level indicates the minimum figure of inventory quantity held in stock at any time.

- ***Minimum level = ROL - (average usage x average reorder period)***
- **Maximum stock level** indicates the maximum figure of inventory quantity held in stock at any time.
- ***Maximum level = ROL + EOQ – (minimum usage x minimum reorder period)***

Reorder level/ point : It indicates the level at which fresh orders should be placed for replenishment of stock.

Reorder level = Maximum usage x Maximum reorder period

For example if consumption of burger is 10,000 units per annum and store operate 350 days and lead time is 10 days then reorder level or point will be:

Demand 10,000 burgers per annum

Store opens 350 days

Daily usage 10,000 / 350 = 28.57

Lead time = 10 days

Reorder level = 28.57 x 10 = 285.7 or 286.00

Reorder point with variable demand

$R = Dl + z\,Od\sqrt{l}$

Where

d=average daily demand

L **=** ***lead time***

D **= average demand rate**

t_b **= the fixed time between orders**

O_d **= standard deviation of demand**

$z\sigma_d \sqrt{t_b + L}$ **= safety stock**

I **= inventory level**

z = number of standard deviations corresponding to the service level probability

$z\sigma_d \sqrt{L}$ = *safety stock*

Case study: The pizza store wants a reorder point with a 95% service level and a 5% stock out probability.

Daily demand =30

L= 10 days

Z = 1.65

σ_d =5

R= Dl + zOd√L

Safety stock level = 1.65 x5 √10 = 26.1

= 30 x 10 + 1.65 x5 √10

Or

=300 + 26.1 = 326.1

Note:

Average stock level = ½ (minimum stock level + maximum stock level)

Average reorder period = ½ (minimum reorder period + maximum reorder period)

16.5. Economic order quantity (EOQ)

The EOQ is the optimum or the most favourable quantity which should be purchased each time when the purchases are to be made. In other words the EOQ determines how much to buy at a particular time.
The EOQ can be computed by using the following formula:

EOQ = $\sqrt{\frac{2UO}{IC}}$

Where :U = Annual usage in units O = Cost of placing an order I = Percent cost of carrying inventory and C = Cost per unit of material

Order quantity for a periodic inventory system with 95% service level

$Q = d\,(t_b + L) + z\sigma_d\sqrt{t_b + L} - i$

Where

d **= average demand rate**

t_b **= the fixed time between orders**

L **= lead time**

o_d **= standard deviation of demand**

$z\sigma_d\sqrt{t_b + L}$ **= safety stock**

i **= inventory level**

Case study: determine order quantity with 95% service level where

d **= 6 bottles per day**

t_b **= 60 days**

L **= 5 days**

o_d **= 1.2**

$z\sigma_d\sqrt{t_b + L}$ **= safety stock**

I **= 8 bottles**

***Z* = 1.65 (95% service level)**

$Q = d\,(t_b + L) + z\sigma_d\sqrt{t_b + L} - i$

$Q = 6\,(60+ 5) + (1.65 \times 1.2)\sqrt{60 + 5} - 8$

= 397.6 bottles

Re Order Point Sub Systems: The Re order point is level of inventory at, which the firm places, and order and account of EOQ. If the place the order when the inventory reach the reorder point the new goods will arrive before the firms run out of goods to sell. In designing **Re Order Point** subsystems three information's are needed as inputs to the systems.

1.Usage Rate: this the right per day at which items are consumed in productions or sold to customers it is expressed in units it may be calculated by annual sales / 365 day.

2.Lead Time: This is amount of time between placing an order and receiving the goods this information is provided by purchasing department. The time to allow for an order to arrive may be estimated from a cheque of the Company' Records And Time Taken In Pass For Different Suppliers To Complete Orders

3. Safety Stock Levels: The minimum level of inventory may be expressed in terms of several days' sales. This level can be calculated by multiplying the usage rate with the no. of days that the firm wishes to hold sufficient inventory.

Example: For fifteen days of production in the event the safety stock level will be 15 days if raw material does not arrive on time and is calculated in terms of the units of inventory by multiplying 15 times the daily usage rate.

The reorder point = (usage rate) (lead times + days of safety)

Annual sales of 9125 units

Desiere to maintain 12 days safety stock limit

Lead time= 8 days

Reoerder point =(9125/365) x (8+20) = 25x20 = 500 units.

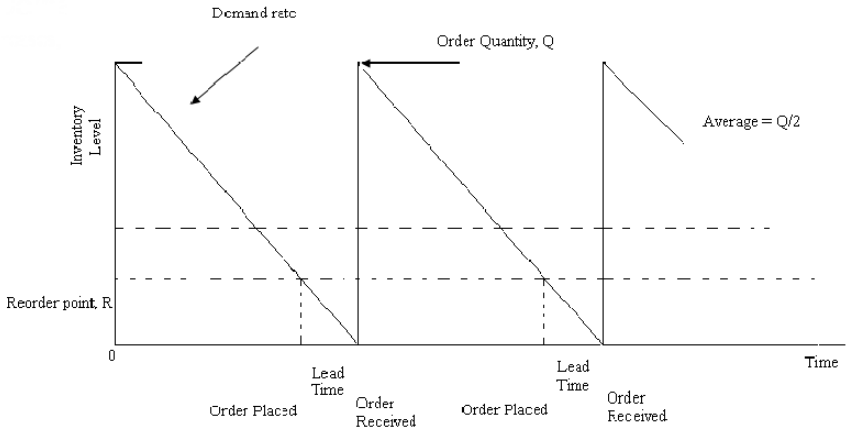

Fig: Graphical representation of various stock levels, lead time and EOQ.

16.6 ABC Analysis

This is a selective inventory control based on "value of items consumed".According to this method inventory items are classified into three categories under two heads as follows:

Class	**% of total Inventory items**	**% of total Inventory value**
[A] High value items	15 – 20 %	75 – 80 %
[B] Moderate value items	20 – 25 %	10 – 15%
[C]Low value items	60 – 65 %	5 – 10 %

The key principle underlying ABC analysis is that time, efforts and money for inventory control should be allocated amongst inventory items in proportion to their respective values in terms of % of total inventory items and % of total inventory value.

Case study: Following data are given about the consumption pattern of various commodities. Categorize them into ABC.

Commodities	Unit Cost in Rupees	Annual Usage
1	60	90
2	350	40
3	30	130
4	80	60
5	30	100
6	20	180
7	10	170
8	320	50
9	510	60
10	20	120

Solution:

Commodities	***Total Value***	***% of total value***	***% of total quantity***	***% cumulative***
1	5400	6.3	9.0	9.0
2	14000	16.4	4.0	13.0
3	3900	4.6	10.0	23.0
4	9800	5.6	6.0	29.0
5	3000	3.5	13.0	42.0
6	3600	4.2	18.0	60.0
7	1700	2.0	17.0	77.0

8	16,000	18.7	5.0	82.0
9	30,600	35.9	6.0	88.0
10	2400	2.8	12.0	100.00
Total	85,400	100	100	

ABC Analysis

Commodities	***Total Value***	***% of total value***	***% of total quantity***	***% cumulative***
9	30,600	35.9	6.0	6
8 A	16,000	18.7	5.0	11
2	14000	16.4	4.0	15
1	5400	6.3	9.0	24
4 **B**	9800	5.6	6.0	30
3	3900	4.6	10.0	40
6	3600	4.2	18.0	58
5 **C**	3000	3.5	13.0	71
10	2400	2.8	12.0	83
7	1700	2.0	17.0	100
Total	85,400	100	100	

Class	***Commodities***	***% of total***	***% of total quantity***
A	9, 8 and 2	71.0	15
B	1, 4 and 3	16.5	25
C	6,5, 10 and 7	12.5	60

Inventory turnover or stock turnover

Inventory turnover is a technique commonly used in F&B operations to evaluate the adequacy of a food/beverage inventory i.e. how often a food/beverage inventory has been consumed and replenished during an accounting period.

The rate of inventory turnover is calculated by means of the following formula:

Rate of Inventory Turnover = Food Cost/ Average Inventory

Average Inventory = **Opening inventory + Closing inventory**

2

16.7 Calculating Menu Selling Prices

Commercial food service operations, as well as many institutional facilities, must establish appropriate selling prices for menu items. Objective pricing methods ensure that the property's

profit requirements, as well as the value guests attach to the entire dining experience (including service, cleanliness, and ambience), are incorporated into the selling price. In this section, we review several pricing approaches used in food and beverage operations, including:

- Subjective pricing methods.
- Objective pricing methods.
- Simple mark-up (by multiplier) pricing methods.
- Contribution margin pricing method.
- Ratio pricing method.
- Simple prime costs method.
- Specific prime costs method.

16.7.1 Subjective Pricing Methods

Although prices determine to a large extent whether financial goals of the: operation are met, many managers use very subjective pricing methods. These methods establish prices, but generally fail to relate them to profit requirements or even costs. When the subject of pricing methods comes up, many managers speak about the "art" of pricing and suggest that intuition and special knowledge about guests' ability to pay are the most important considerations. Consider the following pricing methods and notice that each is based simply on the manager's assumptions or guesses about what prices should be.

16.7.2 The Reasonable Price Method.

This method uses a price that the food service manager thinks will represent a value to the guest. The manager presumes to know-from the guest's perspective-what charge is fair and equitable. In other words, the manager asks, "If I were a guest, what price would I pay for the item being served?" The manager's best guess in answering this question becomes the product's selling price.

The Highest Price Method. Using this plan, a manager sets the highest price that he or she thinks guests are willing to pay. The concept of value is stretched to the maximum and is then "backed off" to provide a margin of error in the manager's estimate.

The Loss Leader Method. With this plan, an unusually low price is set for an item (or items). The manager assumes that guests will be attracted to the property to purchase the low-priced item(s) and that they will the~ select other items while they are there. Beverage or food prices on some items are set low to bring guests into the property, but purchases of other items are necessary for the operation to meet profit requirements. This pricing method is sometimes used as an "early bird" or senior citizen discount to attract specific segments of the market.

The Intuitive Price Method. When prices are set by intuition alone, the manager takes little more than a wild guess about the selling price. Closely related to this approach is a trial-and-

error pricing plan-if one price doesn't work, another is tested. The intuitive price method differs from the reasonable price method in that there is less effort to determine what represents value from the guests' perspective.

These pricing methods are based on assumptions, hunches, and guesses. Such methods are generally ineffective because they do not consider profit requirements and the product costs necessary to put the item on the table.

Subjective pricing methods may be common in the food service industry simply because they have been used in the past, because the manager setting prices has no information about product costs or profit requirements to work with, or because the manager is not familiar with more objective methods. In today's market, with increased consumer demands for value in dining, and with higher purchase prices for products needed by the property, these plans seldom work.

Objective Pricing Methods

If the reasonable price, highest price, loss leader, and intuitive price methods are subjective and should not be used, what are better alternatives? Objective methods based on data in the approved operating budget help the manager transfer budget plans into selling prices that help generate revenue required by the operating budget. Each of the methods that follow, to some extent at least, helps the manager to better ensure that selling prices incorporate budget requirements.

Before any objective pricing method can be used, however, three basic cost procedures must be in place and consistently used.

- Standard recipes. A standard recipe must be available for each item when a selling price is being developed. For example, if the manager is pricing an oyster platter, standard recipes must be available for the oyster entree, its garnish, salad with dressing choice, potato or other starch, vegetable choice, bread and butter, and any other items included in the" oyster platter."
- Precosting with current costs. Each affected recipe must be precosted with current market cost data to determine the cost to produce one portion of each component of the menu item being priced.
- Standard recipes must be used. While this may be obvious, many operations have standard recipes available but members of the staff do not consistently use them. Too often, because of labor turnover and other reasons, production personnel deviate from recipes that have historically dictated the quantity, methodology, and cost of food production. If recipes are not used, there is no reason to have them or to cost them.

16.7.3 Simple Mark-Up by Multiplier Pricing Methods

Some pricing methods use a mark-up by a multiplier based on food costs for menu items. The methods are designed to cover all costs and to yield the desired profit. The following paragraphs examine ingredients mark-up pricing, prime-ingredient mark-up pricing, and mark-up with

accompaniment costs pricing. Advantages and disadvantages of these methods are also discussed.

Ingredients Mark-Up Method. The **ingredients mark-up pricing method** attempts to consider all product costs: food costs when pricing food items and beverage costs when pricing beverages. The three steps to pricing with this method are as follows:

1. Determine the ingredients' costs from all applicable standard recipes.
2. Determine the multiplier to use in marking up the ingredients' costs.
3. Establish a base selling price by multiplying the ingredients' costs by the multiplier.

A base selling price is not necessarily the final selling price, because the simple output from formulas may not yield an appropriate final selling price. Rather, a base selling price is considered a starting point from which other factors must be assessed and the price adjusted accordingly. These other factors—addressed later in this chapter-are important pricing considerations.

The multiplier determined in step 2 is generally based on the desired food (or beverage) cost percentage (which might be established by in-house assessment procedures or from budget development). For example, if the desired food cost percentage is 40 percent, the multiplier would be 2.5, determined as follows:

$$\text{Multiplier} = \frac{1}{\text{Desired Food Cost Percentage}}$$

$$2.5 = \frac{1}{0.40}$$

Assume that an oyster platter has a standard food cost of 5.32 (the total per-portion cost of the standard recipes for all items constituting the dinner). If a 40-percent food cost is desired, the price of the oyster platter is determined as follows:

Base Selling Price	=	Ingredient Cost	x	Multiplier
13.30	=	5.32	x	2.5

If this price appears reasonable based on the market for oyster platters, then the item is sold for about 13.30.

16.7.4 Main-Ingredient Mark-Up Method.

The prime-ingredient mark-up pricing method differs from the ingredients mark-up method in that only the cost of the prime ingredient is marked up. In addition, the multiplier used must be greater than the multiplier used when considering the total cost of all ingredients.

Using the same oyster platter example, assume the prime ingredient cost is 2.65 (in this case, the prime ingredient is one portion of oysters). If a multiplier of 5.02 is used, the oyster platter is priced at 13.30. The price is calculated as follows:

Base Selling Price	=	Prime Ingredient's Cost x Multiplier		
13.30	=	2.65	x	5.02

If the cost of the oysters in this example increases to 2.75 for the dinner portion, the new price would be 13.81 (2.75 X 5.02).

The main-ingredient approach assumes that the costs of all ingredients change in proportion to the main ingredient. That is, when the prime ingredient's cost increases 10 percent, then other ingredients' costs are assumed to increase by 10 percent also.

Mark-Up with Accompaniment Costs Method. Using the **mark-up with accompaniment costs pricing method**, managers determine ingredient costs based only on entree items and then add a standard accompaniment or "plate" cost to this amount before multiplying by a multiplier. This plate cost is an average cost for all non-entree and other relatively inexpensive items including salad, vegetables, bread, butter, and non-alcoholic beverages. For example:

Entree Costs		3.15
Plate Cost	+	1.25
Estimated Food Cost		4:4O
Multiplier	×	3.3
Base Selling Price		14.52

Note that the "plate" cost, covering the estimated food cost of all items other than the entree cost, is added to the entree cost before the multiplier is used.

An advantage of this method is its simplicity. Careful calculations for only the expensive entree costs are necessary. Time can be saved by combining all other food costs into an estimated plate cost.

A disadvantage may be that plate costs are not truly representative of food costs associated with these other items. How is the plate cost determined? How often is it adjusted? Also, managers must establish a reasonable and objective multiplier that relates to profit requirements. If this is not done, the mark-up .with accompaniment costs pricing method is no better than the subjective pricing methods discussed earlier.

Determining the Multiplier. The mark-up pricing methods just discussed are simple to use and, for that reason, are commonly used in the food service industry. A significant disadvantage, however, involves determining the multiplier. How does a manager decide this? For many managers, it is a subjective decision based primarily on experience and "rule of thumb" (such as the traditional 40-percent food cost). Should managers use last year's average food cost percentage? Should they use a statistic supplied by a national, state, or other food service association or consulting firm?

It is possible, of course, to use a multiplier based on the planned food and other costs from the operating budget. If, on the average, menu items are priced to yield the food cost percentage dictated by the budget, planners have developed a simple foundation for generating revenue sufficient to cover food costs and to yield a **contribution margin** (food revenue minus food costs) sufficient for other expenses and profit requirements. The little time required to generate and use a multiplier based on the operating budget may make it especially cost effective for many small-volume operations.

However, the impact of sales mix cannot be overlooked. If, for example, increased unit sales of a higher food cost percentage item replace sales of its counterparts with lower food cost percentages, the average food cost percentage can be made according to budget-but with undesirable financial results. Note, though, that use of an ideal (theoretical) food cost percentage (which is easily calculated with modem pas system technology) addresses this concern by using data based on the actual (not historical) sales mix.

There are other potential disadvantages of using simple multiplier pricing methods. For example, these methods do not reflect higher or lower labor, energy, or other costs associated with production of specific menu items. Rather, they either assume that all operating costs relate in some direct way to food costs or that these cost differences can be ignored. These assumptions may not be warranted when, for example, one considers the extensive amount of labor required to prepare some items relative to others.

The mark-up pricing methods using a multiplier also assume that all food costs associated with producing a menu item are known. In fact, many other costs may be excluded from the cost of ingredients used as the base for the multiplier. For example, operators not adjusting cost of goods sold by values of transfers to and from the food department would ignore these costs. Also, how are theft, pilferage, overportioning, and spoilage addressed when standard recipe costs alone are used as the base for the multiplier? What about minor costs such as herbs and spices-often ignored in price calculations but relatively expensive when a year's worth of purchases is considered? Problems with calculating costs of "help your self" salad or dessert bars, and all-you-can-eat buffets also emphasize the point that multipliers applied to partial food costs may not yield accurate base selling prices.

16.7.5 Contribution Margin Pricing Method

The term contribution margin refers to the amount left after a menu item's food cost is subtracted from its selling price. The contribution margin is the amount that the sale of a menu item "contributes" to pay for all non-food costs allocated to the food service operation and to help with profit requirements. With a **contribution margin pricing method**, managers can set base selling prices for menu items by following two steps:

1. Determine the average contribution margin required per guest by dividing all non-food costs plus required profit by the number of expected guests.

2. Determine the base selling price for a menu item by adding the average contribution margin required per guest to the item's standard food cost.

Let's assume that the approved operating budget provides that all non-food costs are 695,000, required profit is set at 74,000, and 135,000 guests are expected to be served. With this information, the manager can calculate a base selling price for a menu item with a standard food cost of 4.60 as follows:

- **Step #1: Determine the average contribution margin required per guest.** This can be accomplished by using the following formula:

$$\frac{\text{Non-Food Costs + Required Profit}}{\text{Number of Expected Guests}} = \begin{matrix}\text{Average Contribution} \\ \text{Margin Required per Guests}\end{matrix}$$

$$\frac{\$695,000 + \$74,000}{135,000} = \$5.70$$

- **Step #2: Determine the base selling price for a menu item:** This is done by adding the average contribution margin required per guest to the item's standard food cost. The base selling price for a menu item with a 4.60 food cost would be 4.60 + 5.70, or 10.30.

Advantages of this method are its ease of use and practicality when reasonably accurate information is available from the operating budget. It is also useful in those operations where costs associated with serving each guest are basically the same, with the exception of varying food costs. Also, this method tends to reduce the range of selling prices on the menu, since the only difference is reflected in the actual food cost incorporated in the selling price. This method also assumes that each guest should pay the same share of the property's non-food costs and profit requirements.

Ratio Pricing Method

The **ratio pricing method** determines the relationship between food costs and all nonfood costs, plus profit requirements (contribution margin). It uses this ratio to develop base selling prices for menu items. The three steps to ratio pricing are as follows:

1. Determine the ratio of food costs to all non-food costs plus required profit by dividing all non-food costs plus profit by food costs.
2. Calculate the amount of non-food costs plus profit required for a menu item by multiplying the standard food cost of the menu item by the ratio calculated in step 1.
3. Determine the base selling price of a menu item by adding the result of step 2 to the standard food cost of the menu item.

Assume that the approved operating budget of a family-style restaurant (with no alcoholic beverage sales) provides the following information: food costs are 435,000, all non-food costs (labor and other costs) are 790,000, and required profit is 95,000. Using the ratio pricing

method, the manager establishes a base selling price for a menu item with a standard food cost of 4.75 as follows:

- **Step #1: Determine the ratio of food costs to all other costs plus profit requirements.** This is calculated with the following formula:

$$\frac{\text{All Non-Food Costs + Required Profit}}{\text{Food Costs}} = \text{Ratio}$$

$$\frac{\$790,000 + \$95,000}{\$435,000} = 2.03$$

This ratio means that for each 1 of revenue required to cover food costs, 2.03 of additional revenue is needed to pay for non-food costs and meet profit requirements.

- **Step #2: Calculate the amount of non-food costs and profit required for a menu item.** This is accomplished by multiplying the standard food cost of the menu item by the ratio calculated in step 1. Therefore, if the standard food cost of the menu item is 4.75, the amount of non-food costs and profit required is 4.75 x 2.03, or 9.64.
- **Step #3: Determine the base selling price for the menu item.** This is done by adding the result of step 2 to the standard food cost of the menu item. The base selling price for the item with a 4.75 food cost would be 14.39 (4.75 + 9.64). This, then, includes the food and non-food costs and the menu item's profit requirement.

The ratio method of menu pricing is simple to use and can be based on operating budget requirements. However, it does have several disadvantages. In an operation offering both food and beverages, it is necessary to separate non-food costs and profit requirements between the two revenue centers. Also, under this pricing method, each meal assumes an equal share of non-food costs and profit. The ratio pricing method does not compensate for higher labor costs associated with the preparation of labor-intensive menu items.

16.8 Summary

Inventory control is one of the most important aspect of F & B Control and absence of inventory control can lead to huge losses. It is very scientific system and need very focused and dedicated approach for achieving desired outcomes.

16.9 Review Questions

14. Write formulae to calculate the following:
    i. EOQ b. BEP c. Stock turn over d. Gross Profit e. Average inventory
15. Explain role of Inventory Management system.
16. Define the following terms:
17. Lead Time b. Inventory c. Margin of safety d. Fixed cost e. Variable cost

18. Analytical problems

a. ***The information given below is in respect of a product ZED*:**

(a) Monthly demand of ZED = 1,000 units
(b) Cost of placing an order Rs. 100
(c) Annual carrying cost per unit Rs. 15
(d) Normal usage 50 units per week.
(e) Minimum usage 25 units per week.
(f) Maximum usage 75 units per week.
(g) Re-order period 4 to 6 week.

Compute from the above

(1) Re-order quantity (EOQ)
(2) Re-order level
(3) Minimum level
(4) Maximum level
(5) Average stock level

b. Find out re order level, maximum stock level, minimum stock level and average stock level of Bisleri Soda if average usage 200 bottles per day, maximum usage 250 bottles per day, minimum usage 120 bottles per day and re order period varies from 5 -15 days.

c. **Calculate for each brand of beer:** Re order level, minimum level**,** maximum level **and** average stock level **of *two brands of Beer*** namely King Fisher & Golden Eagle are consumed as follows:

- Average usage= 100 units per week
- Minimum usage= 50 units per week
- Maximum usage= 150 units per week

Re order quantity or EOQ

- King fisher= 600 units
- Golden eagle= 1000 units

Reorder period

- King fisher= 4 to 6 weeks
- Golden eagle= 2 to 4 weeks

d. The annual demand for bed sheets in a 5 star hotel is 20,000 sheets. Order cost is Rs 46 / order. The holding cost is Rs 0.115 per bed sheet per year. Calculate the EOQ.

e. The annual demand for a material is 4,000 kg. Stock holding costs are 20% per annum. The unit price is Rs 6 per kg. The delivery cost per order is Rs 6. Calculate the EOQ.

Hints

- Reorder level= maximum usage x maximum re order period
- Minimum level= ROL - (Average Usage x Average ROP)
- Maximum level= (ROL+ EOQ) – (minimum usage x minimum ROP)
- Average stock level= ½ (minimum stock level+ maximum. Stock level)
- Average reorder period= ½ (minimum ROP + maximum ROP)

16.10 Suggested Reading

1. Food and Beverage Service- D.R.Lillicrape and J.A.Cousin Seventh edi. E.L.B.S.
2. Bar and Beverage Book, Costas Katsigris, Marry Porter. Wiley Service Management Series.
3. Bar and Beverage Operation, Chris Parry. Atlantic Publishing Company.
4. Professional Bar and Beverage Managers Handbook. Atlantic Publishing Company.
5. The Restaurant. Edi IV. Walker and Lundburg.