

UNIVERSITY OF MUMBAI  
**HOUSEKEEPING**

**B.SC HOSPITALITY STUDIES**  
**SEMESTER V**



## **ACKNOWLEDGMENT**

This is to inform all the students of **B.Sc. Hospitality studies (University of Mumbai)** that the content of these notes has been decided in the meeting which was held on 25<sup>th</sup> July 2018 at Rizvi college of Hotel Management, Bandra.

- The following colleges were present during the meeting.
  1. **Anjuman Islam – Darshana mam**
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  14. **APJ college-Smita mam**
  15. **Muchalla college- Runa Mam**

The above **University of Mumbai** affiliated college's senior faculty members have compiled these standardized notes for the benefit of the students with the mutual understanding. We really appreciate the efforts of each and every faculty member.

We owe our deep gratitude to each and every faculty member who took keen interest in compiling the notes.

We wish all the best of each and every college student for their great future endeavor. We also would like to thank **St. Andrews College** for helping in compiling a few topics.

Thanking you,

With Best Regards

**Mr.Sail Naik**  
**(Rizvi College of Hotel Management)**

**SEMESTER V**  
**SYALLABUS OF HOUSEKEEPING**

**Unit No. 01**

**1 Current Trends in Housekeeping**

- 1.1 Green housekeeping practices
- 1.2 Cleaning equipment and agents
- 1.3 Guest supplies and amenities
- 1.4 Level of service (Limited Service, Mid-Range and Full Service)

**2 Contract Services / Outsourcing**

- 2.1 Types of contract
- 2.2 Guidelines for hiring contract services
- 2.3 Advantages and disadvantages of contract service

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- 3.1 Determining staff strength (fixed staff)
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## **Unit 1-Lesson 1**

### **CURRENT TRENDS IN HOUSEKEEPING**

- 1.1 Green housekeeping practices
- 1.2 Cleaning equipment and agents
- 1.3 Guest supplies and amenities
- 1.4 Level of service (Limited Service, Mid-Range and Full Service)

- **HYGIENE, NOT JUST CLEANINESS**

Today, each hospitality chain is recognized by its score for the hygiene standards it follows throughout all its properties. While considering hygiene in guestrooms, housekeepers have to notice of matters such as the air quality and sanitation. The use of optimal and ideal detergents, sanitizers, and other cleaning agents that give protection against any possible microbial attack is imperative.

Since the time available for the quick recovery of a room after a guest departs is getting smaller as people travel more, the conventional cleaning procedure is now giving way to newer trends. For instance, bed covers are being done away with; instead, duvets are used. The duvet covers are compulsory changed after a departure, and thus the next guest gets into a fresh, hygienic bed. Carpets on guestroom floors are being replaced by wooden flooring. This too is a step towards negating the chances of bacteria breeding in-house. The headboards of beds which initially used to be padded with foam and upholstered were friendly to microbes, hair and skin debris, and grease. These are now increasingly being replaced by leather coverings or solid wood for easy maintenance and disinfecting.

Another revolutionary trend in the hygiene in hotels is the advent of *microfiber* cleaning technology into housekeeping. The use of microfibers dusters and mops results in much more effective dirt and germ control than their traditional counterparts. It is an eco-friendly change due to the absence of chemicals and being low cost

- **OUTSOURING**

The realm of housekeeping has witnessed a huge growth in the trend of outsourced services, especially over the past few years, in India. Housekeeping being a labor-intensive department, housekeepers perceive outsourcing as an effective business strategy, especially for the continual maintenance of the public areas of their properties. Most hotel chains, across all segments, have resorted to outsourcing nowadays.

Today, housekeeping demands skilled specialization, which in turn requires a sizeable investment in terms of the infrastructure and equipment required to achieve superior results. Housekeeping, experts opine that outsourcing proves to be the best solution for many specialized tasks as it is highly cost-effective, makes better business sense, and at same time meets the demand of quality standards. It brings in ‘specialists’ both in terms of man and machine to deliver quality as per the standard norms and philosophy laid down by the individual property.

The jobs that are generally outsourced are garden maintenance, management of ‘wet areas’ such as the swimming pool, gym maintenance laundry services, façade cleaning, floor care, carpet care, horticulture, public-area cleaning, terrace maintenance, pest control, exterior window cleaning and marble polishing. These are areas where there is no direct contact of housekeeping staff with an individual guest. Therefore, outsourcing is getting the cleaning and maintenance of these public areas does not affect the chances of getting repeat guests in terms of housekeeping services. In addition, outsourcing is preferred in certain areas of hotel as they require specialized skills and expensive machinery for the tasks to be performed well. Outsourcing cuts down on the training needed for operating these machines and the safety hazards that are often involved, as well as the need for investment in machinery that is not used frequently. Especially in exterior areas, outsourcing works well for hotels as it also minimizes manpower-related issues such as the need-gap caused due to attrition of manpower, unavailability of suitable personnel to fill the need, and unionization.

Indeed, hotels prefer outsourcing primarily for two reasons: one is the reduction of costs and the other is the avoidance of problems related to unionization.

The housekeeping departments of several hotel chains are also moving towards taking their laundry facilities off-site and into a centralized operation to capitalize on

the economies of scale in a new twist on ‘outsourcing’. As these hotels chains have several hotels within market or region, a centralized facility can lower costs to the individual housekeeping departments, increase quality control, and allow housekeepers to run their department smoothly.

However, outsourcing has not- and is unlikely to foray- into the core areas of housekeeping that go beyond simple physical labor and where service and security are of paramount concern. Housekeepers opine that consistent quality service, dedication, sincerity, and honesty can only be achieved if the staffs have a sense of belonging within the organization.

- **TRAINING AND MOTIVATION**
- **Training**

An individual employee needs to be trained and equipped to handle the job he / she is required to do efficiently and pleasantly with the least possible expenditure of time, effort, and resources. The SOP manual developed after a work study has been undertaken at the property should be the underlining tool for the same.

For training in the use of equipment, many housekeepers are tying up with companies that supply the equipment to the hospitality industry. Hotels are also promoting cross training, thereby reducing the worry of staff requirements by making it possible to rotate inter-department shifts during high pressure situations.

Another upcoming training trend is that of housekeepers collaborating with hotel management institutions for theoretical knowledge, where the institutions faculty deliver lecture sessions to the housekeeping staff. Training for housekeeping staff has to be divided into four parts – attitudinal, technical, soft skills, and SOP’s. The first two aspects are usually grossly neglected in training modules and the later have to be learnt on the job. The quality of on-the-job training available to staff at a property depends on the managerial mindset. Some hotels may not choose to invest in training staff and prefer to save money. In the long run, though, they often end up losing money due to lack of trained staff. One way or the other, the hotels ultimately end up paying for training, so it is best to get it right from the start.

- **Motivation**

Retaining and motivating staff is crucial for the success of any organization. This is especially true in the hospitality industry, where the housekeeping team members are

involved in unglamorous tasks that very often go unnoticed. Described as an extremely monotonous and thankless job even by veterans of the industry, housekeeping is still in need of attention and innovation. It is not incentivized in the same way as some other departments in a hotel. In addition, lack of communication between the Managerial and grassroots levels leaves employees frustrated and overworked and of course unskilled and untrained employees can be a challenge, coupled with massive attrition rates of trained personnel due to more lucrative options coming up.

Entertainment and rewarding options to break the veritable monotony by way of outings, forums in which to exchange views and facilitate an exchange of dialogue, or recognition of employees by name go a long way towards ensuring job satisfaction. Team parties, public appreciation and taking suggestions from employees are all good tools for motivation.

- **TRENDS**

There are many new trends in hotels that are changing the nature of housekeeping in hospitality.

- **WOMEN’S-ONLY FLOORS**

Many luxury hotels now offer an exclusive women’s-only floor due to a surge in the number of women business travelers. The trend started in India with the ITC hotels and has now been implemented by many other hotels. The Eva floor offers rooms and services exclusively to women travelers.

1. The Eva floor can be accessed only by women; no male staff is allotted to the floor and no male guest is allowed access to the floor.
2. The entire operations on the floor are managed by a female crew.
3. There is a separate elevator access to the floor; this elevator does not allow access from other floors.
4. .The décor of the rooms and amenities placed too emphasizes femininity, for example, pink or lavender linen, ladies grooming kit, yoga kit, jewellery box, facial steamer, hair dryers, pedicure machines, silk curtains, super soft furry cushions, soft fur rugs, aroma oils, fresh flower arrangements, and so on.
5. Feminine needs such as full-length mirrors, makeup mirrors, and extra cosmetics are placed as standard contents.



- **DESIGN TRENDS**

The following trends in design are observed in public areas in the hotels:

1. Increased use of low emissive glass for exterior walls, doors, and windows of main building of hotels. This glass is treated with an invisible metallic oxide Coating, creating a surface that allows light to pass through, while reflecting the heat. Use of this glass reduces energy consumption, decreases fading of window treatment fabrics, and enhances the comfort factor in residential buildings,
2. The lobby has new functional spaces such as lobby bar and patisserie area.
3. Contemporary state-of-the-art lighting fixtures with LED are used in elaborate chandeliers.
4. Vertical gardens are a sustainable trend. These are miniature gardens that scale the walls vertically and require very little water for maintenance.
5. New concepts in flower arrangements are seen with minimal flowers and more foliage and dried plant material is being used. Aesthetic vases are used.
6. Trends in landscaping are towards having more outdoor seating and dining areas.
7. Use of small and large indoor plants in interiors rather than elaborate flower arrangements is another sustainable initiative.

**The following trends are seen in guestrooms in hotels:**

1. Interiors are turning stylish in elements of texture, form, light, and color.
2. Vibrant colors are being experimented with in guestroom interiors.
3. Hotels are investing in beds with thick plush mattresses, which offer high degree of comfort and are hypoallergenic too.
4. Exposed bathrooms are a fast catching up trend especially in guestrooms at resorts and spas. These bathrooms are exposed to the sky as there is no roof. Flooring has pebbled areas and typically some outdoor plants can be found in exposed bathrooms.
5. Spacious bathrooms are in vogue with both shower cubicle and bath tub.
6. Contemporary sleek bathroom fixtures with sensors to control flow of water are a trend.
7. Personal Jacuzzi and Whirlpools can be found in contemporary guestrooms.

- **AMENITY TRENDS**

As competition is increasing, the following extra amenities are being offered by hotels to woo guests:

1. Hotels are going for world-class, designer label toiletries and cosmetics to be placed in guest bathrooms.
2. Hotels also place a pillow menu for guests, offering a variety of pillows such as slim soft pillow, super soft pillow, cotton comfort pillow, latex pillow, poly-fill pillow, feather-fill pillow/feather down pillow, tranquility pillow, baby pillow, energy pillow, silk cotton pillow, relax support pillow, ortho-care pillow, air-care pillow, bath comfort pillow (near bath tubs), aromatherapy pillow, cervical pillow, body pillow and meditation pillow.
3. A slumber/sleep kit, which may contain eye mask, ear plugs, aroma roll-ons, and blackout eye band for jet lag, is placed in the drawer of the night stand.
4. A yoga kit can also be found as an amenity in guestrooms. It contain a yoga mat, oil diffusers and aroma oils, CD's on basic yogasanas, yoga hand book, and yoga apparels.

- **PROCESS TRENDS**

1. Turndown services is now being delivered in a more creative way with GRA's placing towel art, flower petal art, and small good night goodies on the bed.
2. Innovation and creativity is also seen in customizing the turndown such as dessert turndown, cognac or liquor turndown, or chamomile green tea turndown.
3. Another area where creativity is being seen in the provision of a bath butler service. In this service, a personal valet makes up a relaxing bath with a preferred essence, floral petals, herbs and bath salts.
4. A choice of beverages and appetizers too are kept ready at arm's length.

- **ECO-FRIENDLY AMENITIES, PRODUCT, AND PROCESSES**

There is an increasing awareness of the need to use eco-friendly amenities, product, and practices in the housekeeping industry.

- **TOILETRIES**

More and more hotels are opting ranges evolved after research and experimentation on the potent healing, curative, and therapeutic properties of herbs, their extracts, and essential oil on the skin and hair especially as laid down in Ayurveda. These products are also not tested upon animals and tend to be biodegradable. Some of the herbs and natural substances frequently used in toiletries such as shampoos, conditioners, creams, lotion, and so on are aloe vera, liquorish, citrus fruits, Indian gooseberry, neem, sunflower basil, pumpkin, cucumber, turmeric, sandalwood, apricot, mace, clove, nutmeg, coriander, rose, henna, clay (especially china clay), alum, and honey.

- **TEXTILES**

Some international chains and ecotels are experimenting with textile made of bamboo fibres as an environmental sustainable material for bed and bath linen and uniforms. Bamboo is one of the world's most prolific, regenerative crops and is grown without the use of any pesticides or fertilizers. Fabric made of bamboo is naturally antibacterial and hypoallergenic. Bamboo fibres are usually blended with cotton (65% : 35% or 45%: 60%) to yield more absorbent, softer, and smell resistant luxury bath linen than normal ones. Bamboo fabrics have unique silky textures and are superior to cotton in terms of softness, durability, and comfort and are therefore ideal for the manufacture of bed linen. The fabrics do not pill. The bamboo fibres under microscope shows various gaps and holes and hence the fabrics made out of it can rapidly absorb and evaporate moisture, making them exceptional comfortable. Moreover, bamboo is cool in summer and warm in winter.

- **ENERGY- CONSERVING PRODUCTS**

Housekeeping are now looking for products and equipment that help conserve energy. One such product is the jet hand-dryer that produces bi-directional jets of cold air jets that come to a head at 68 m/s to leave wet hands bone dry in seconds, in an alternative to the conventional hot-air drying process. The dryer is activated by placing the hands in the dryer bin, whereby the jet starts up automatically. The product's primary advantage is the conventional hot-air model: this machine runs at 700w, whereas the conventional hot-air dryers run at 2000w. This leads to huge saving in power bills- often as much as 67 per cent.

Housekeepers and interior designers today also have at their disposal energy-efficient lamps that consume a mere 9w of power and give the same light output as a 60w bulb. This can reduce power tariffs by as much as 80 per cent without taking away the aesthetic appeal of the property. Some trends in lighting that have been gaining momentum in Indian hotels are the use of luminaries and lids with sensor technology, compact luminaries, and compact halogen lamps.

- **OZONE TREATMENT**

Ozone treatment is emerging as a clean and environment-friendly technique that has a wide variety of applications in the house keeping department. Ozone is a form of oxygen molecule composed of three atoms of oxygen instead of the usual two. It decomposes quickly and turns into regular oxygen easily, however, when the extra oxygen atom splits away from the ozone molecule. This extra oxygen atom then tends to oxidize substances it comes in contact with. Thus ozone can act as a disinfectant. As a disinfectant, ozone is safer and more effective than chlorine since it purifies water and air leaving behind no harmful by-products.

1. **Air treatment with ozone** ozonizers can be used to treat the air in hotel rooms and public areas.
2. **Room ozonizers** this is a compact device that can be used to disinfect and deodorize air-conditioned rooms, thus improving the indoor air quality. Room ozonizers effectively remove the smell of smoke and other foul odours that have built up in course of everyday use.
3. **Ozonizers for lobbies and corridors** ozonizers can also be placed in lobbies and corridors or passage to disinfect the air and effectively remove all foul odours. Small-capacity ozonizers, such as the 1-gram models, can be enough to minimize the odour in such areas.
4. **Ozonizing air-scrubbers in bars and pubs** these are generally smoky areas, and many people – both smokers and non-smokers – experience discomfort in such crowded places when the smell of food mingles with these smoky odours indoors. Specially designed scrubbers can draw the foul air out, treat it with ozone to disinfect and clean the air, and then return it through air-handling unit.
5. **Water treatment with ozone** Ozone can also be used to treat drinking water, swimming pools, and recirculated water and laundry operations.

6. **Disinfection of drinking water** ozone is an all-pervasive anti-bacterial and anti-viral agent.it only needs a short reaction time of a few seconds to effectively kill all germs, including viruses, within a few seconds. Ozonizers disinfect, remove turbidity, and unpleasant tastes and odours from water to provide safe drinking water.
7. **Swimming pool treatment** here, ozone is injected at the water entry point of the pool to disinfect water. This makes the water clear, sparkling and appealing. It is safer for swimmers as well compared to chlorine, which is accompanied by certain health hazards – eye irritation, hair loss and skin rashes.
8. **Ozonization of recirculated water** ozonisation of recirculated water in cooling towers dramatically enhances its performance, reducing the operating costs by eliminating the use of chemicals and considerably lowering the make-up water requirement. Its disinfection properties effectively prevent bacteria build-up, as well as destroying organic binding matter such as slime and algae. It thus increases the efficiency of the cooling tower and reduces power consumption as well.
9. **Ozone in laundries** ozone is an effective cleaning agent in all single-color laundry operations since it improves the efficiency of the washing process by reacting with the dirt molecules and converting them to oxides that are easy to treat. Oxone substantially reduces or eliminates the need for laundering chemicals. Its deodorizing properties also help to eliminate any odour from the laundered clothes.

- **NEW SCIENTIFIC TECHNIQUES**

The use of scientific techniques such as work studies and ergonomics is a new trend in housekeeping.

**Work studies**

There are analyses of the tasks, equipment, and time taken to do specific jobs. They can be an important tool in determining the hotel's standard operating procedures. Many housekeepers have realized this value of work studies and are developing SOPS based on work studies done at their properties

## **Ergonomics**

This scientific discipline is concerned with the understanding of interactions between humans and the elements of a system they work in or with in terms of the impact on efficiency and comfort. Work studies of the ergonomic efficiency of each task and the equipment, processes, and the products used in it is necessary for the wellbeing of the housekeeping staff because of the physically demanding profession that it is.

## **Scientific Equipment**

Scientific equipment aids housekeepers to achieve high standards of cleaning and maintenance. For instance, decibel meters are used to check sound level. Sound decibel level on and near bed is to be maintained at 35 db. Lux meters are used to check illumination in an area. The overall lux level of the room should be maintained at 100 lux. Gloss meters are used to check gloss level of flooring. Gloss level of in guestroom should be maintained at 90 and reflectance at 95. IAQ sensors are used to detect imbalances in indoor air quality. Reflect meters are used to check the brightness of hotel linen. The following reflect meter readings are recommended.

- Bed linen- 95
- Bath linen- 94
- Table linen- 95
- Uniforms - 92

- **Level of service (Limited Service, Mid-Range and Full Service)**
  1. **World class service:** These are also called luxury / Five Star hotels, they target top business executives, entertainment celebrities, high- ranking political figures, and wealthy clientele as their primary markets. They provide upscale restaurants and lounges, Valet, concierge services and also private dining facilities.
  2. **Mid-Range Service:** Hotels offering mid-range or otherwise 3 to 4-star hotels service appeal the largest segment of the travelling public. This kind of hotels does not provide elaborate service and have an adequate staffing. They also provide uniformed service, food and beverage room service, in-room entertainments and also Wi-Fi etc.
  3. **Budget / Limited Service:** These hotels provide clean, comfortable, safe, inexpensive rooms and meet the basic need of guests. Budget hotels appeal primarily to budget-minded travelers who want a room with minimum services and amenities required for the comfortable stay, without unnecessary paying additional cost for costly services.

## **Unit 1-Lesson 2**

### **CONTRACT SERVICES / OUTSOURCING**

2.1 Types of contract

2.2 Guidelines for hiring contract services

2.3 Advantages and disadvantages of contract service

- **Definition:**

**CONTRACT:** A contract can be defined as an agreement between two parties negotiating a business deal.

**OUTSOURCING:** It is a conscious business decision to move internal work to an external provider.

- **CONTRACT SERVICES IN HOUSEKEEPING**

Hotels may go in for the following types of outsourcing contracts:

1. Complete cleaning programmes- with all the work and responsibility undertaken by the service provider.
2. Regular, selected cleaning- within an establishment to assist the existing housekeeping staff, for example, the cleaning of public areas at night.
3. Periodic services- to assist existing housekeeping operations such as window cleaning, cleaning of walls and ceilings, and cleaning of carpets.
4. Hiring contacts- with various rental firms for linen, equipment, conference utilities etc.
5. Leasing contracts- for equipment, furniture, and furnishings, which are drawn up for a given number of years. For furniture and upholstery, these are usually written for a 5-7 years lease period; for soft furnishings, the lease is generally for 3 years.
6. The entire housekeeping operations of the property put on contract by a hotel, with the whole gamut of housekeeping activities becoming the responsibility of the contractor.
7. Consultancy services- where a housekeeping expert visits the hotel and guides the existing staff on achieving professional standards



- **HOUSEKEEPING AREAS WHERE SERVICES MAY BE OFFERED ON CONTRACT BASIS:**

1. CLEANING
2. LINEN HIRE
3. EQUIPMENT AND FURNITURE HIRE
4. LAUNDRY
5. FLOWER ARRANGEMENT AND DECORATIONS
6. PEST CONTROL
7. HORTICULTURE AND LAND SCAPING
8. ECO-FRIENDLY GARBAGE DISPOSAL
9. OTHER SERVICES SUCH AS SHOE-POLISHING MACHINES, GUEST AMENITIES SUCH AS HANGERS, ETC.

- **HIRING CONTRACT PROVIDERS:**

The steps to be followed by the management while hiring the contract providers:

1. Put out tenders to at least three contractors and compare quotes.
2. Check out their existing market credibility by contacting previous/current clients. It is very important to get reliable referrals from other hotels, members of professional organisations or business associates.
3. Check references thoroughly and visit other job sites.
4. Check whether the contractor is registered and licensed under The Contract Labour Act 1970 of the Government of India.
5. Preferably select a contract provider with a local office.
6. Check on the degree to which the contract provider undertakes supervision of the work
7. Prepare detailed contract specifications, indicating the exact number of working hours, areas of operation and responsibility, processes to be used, frequency of service, time table, and any special projects.
8. Consider the effect on existing labour with regard to possible redundancy and redeployment.

• **CONTRACT SPECIFICATION**

It is essential that the executive housekeeper provides the service provider with a clearly defined and detailed specification of the work to be done, how it is to be done, and so on.

Contract specification should be carefully worded and should necessarily cover the following points:

1. The period or duration of the contract, date of signing the contract, and a provision for regular review of the specifications.
2. The schedule of areas to be serviced and the frequency with which a job is to be done. This is important, as the level of cleanliness depends on the time lapse between successive cleaning processes.
3. A description of the method, equipment, and materials required, as well as the hotel's quality expectations, including appropriate penalty and cancellation clauses.
4. A list of the security requirements. Sometimes, all contract staff are vetted and specified rooms have to be kept locked.
5. A provision for storage areas, lockers, and perhaps accommodation for the contracted staff.
6. The time expectations for the job, covering sickness and annual leave.
7. A verification of the insurance coverage for workers, guests, hotel employees, and assets.
8. Specified frequencies of inspection agreed upon with the service provider.
9. The remuneration for the job, the terms and conditions of payment, and a termination procedure.

• **ADVANTAGES OF OUTSOURCING:**

1. There is no capital outlay for equipment, so that money is available for investment in other purposes.
2. There is no equipment lying idle.
3. Contracts alleviate the necessity of buying or hiring specialized equipment.
4. The difficulty of finding, training, organising, and supervising staff is passed on to the service provider.

5. Good contract firms provide skilled labourers, well trained in their area of expertise.
6. Extra work may be carried out at certain times without increasing the basic staff.
7. Accurate budgeting can be done for a fixed period.
8. Contractors provide uniformed workers and take responsibility for all their wages and benefits.
9. The contractors are accountable for the results. Their workers stay on the job until it is done.
10. The hotel receives the benefits of the service provider's up-to-date know-how in their area of expertise and of the latest equipment and technology.
11. Knowledgeable experts can provide sound advice and help reduce costs and legal risks. In addition, independent contractors are required to carry their own liability and workers unions.
12. Contract services can generally be terminated faster and more easily than the services of regular employees, while reducing the likelihood of employment claims and lawsuits.

• **DISADVANTAGES OF OUTSOURCING:**

1. Contract services can generally be terminated faster and more easily than the services of regular employees, while reducing the likelihood of employment claims and lawsuits.
2. Workers brought in by the contract providers are not representatives of the hotel and may not have the requisite skills for interactions, or the same pride in their work or job satisfaction.
3. There is loss of flexibility in effecting changes, as the housekeeper no longer controls the entire operations.
4. There is natural tendency among contractors to use cheaper products, which may be poor quality and may damage the building and its contents in the long term.
5. There may be poor supervision, with the standard of work falling below par as a result.
6. Workers may not show up within the designated time frame.
7. There may be problems regarding security.

8. There may be problems regarding liaison and cooperation between departments.
9. Contract cleaners may not meet the hotel's standards of quality.

- **PRICING OF CONTRACTS**

The basis of payment for outsourced services may include one or more of the following:

- 1. Management Fee, consultancy basis:**

- i. The customer provides his own labour equipment and materials and the contractor provides the management expertise and possible supervisory staff.

- 2. A fixed Periodic cost :-**

May be made either as a total cost or cost per unit of work, based on the quality of work or the frequency with which work is carried out. This is the most commonly used method and available in two forms.

- a) **Uncontrolled Input:** - The contractor agrees to provide a service of a given nature for a specified cost. There is no indication of the number of worker hours worked nor type of equipment and materials used. Therefore it is essential that the specification is very detailed.
- b) **Controlled Input:** - The contract also indicates the minimum number of worker-hours provided.

- 3. A cost plus percentage profit basis**

This has the advantage of providing a perfectly viable, flexible programme, as the customer is free to determine his own need as things change. (E.g. occupancy, weather conditions and production). This also provides incentive for the contractor to increase his basic costs in order to earn more profits

- 4. Cost plus fixed fee basis**

The contractor is reimbursed for all costs. (Eg. equipment, materials and labour) and is fixed fee for the management of the programme. This provides a flexible programme along with the elimination of any

incentive to spend more money. The contractor is guaranteed a reasonable profit, as long as he continues to perform good service.

### **5. Unit Rate Agreements**

Most contracts are agreed on a unit-rate basis. The executive housekeeper provides details of the area to be covered and the frequency of the job, and asks the service provider for the costs. The contractor measures the area and calculates the cost thus

$$\text{Man-hours} = \text{areas} \times \text{time} \times \text{frequency}$$

For example, if a contracted firm has to clean five different areas, taking two hours each, twice a week, then man-hours will be calculated as:

$$\begin{aligned} \text{Man-hours} &= 5 \times 2 \times 2 \text{ hours} \\ &= 20 \text{ hours} \end{aligned}$$

To the cost of wages, the firm adds costs of equipment, agents, and supplies, plus overheads and profits, and then quotes a price.

## **Unit 1-Lesson 3**

### **MANPOWER PLANNING**

3.1 Determining staff strength (fixed staff)

3.2 Scheduling staff (Duty Rosters)

- **DETERMINING STAFF STRENGTH**

Good management of the housekeeping department depends on achieving a balance between the workload and the staff strength. The factors to be considered are:

1. The type of hotel
2. The quantity of work to be done
3. The location of the hotel
4. The quality of work expected, that is, the standards to be met Traditions and customs of the locality
5. The size of the hotel
6. The time needed to do the work.
7. The occupancy rate of the hotel
8. The frequency with which the work needs to be done
9. Management needs
10. Company policies
11. The time when the work area is available
12. The amount of traffic in the area.

- **THE STAFFING GUIDE**

A staffing guide is a documental tool that specifies the positions within a department and the number of people required to fill these positions at various occupancy levels of the hotel.

**Managers Supervisors**

- Executive housekeeper : 1 per property
- Deputy/assistant housekeeper : 1 per property
- Floor supervisor : 1 per 50 rooms in morning shift  
1 per 100 rooms in afternoon shift  
1 in night shift
- Public area supervisor 1 per 10,000sqft public area per shift
- Desk supervisor 1 per shift
- Linen room supervisor 1 in morning shift
- Uniform room supervisor 1 in morning shift

**Housekeeping Attendants**

- Guest room attendant 1 per 14 rooms in morning shift
- Guest room attendant 1 per 50 rooms in evening shift
- Guest room attendant 1 per 100 rooms in night shift
- Public area attendant 1 per 2,500sqft public area per shift
- Horticulturist 1 per property
- Gardeners 1 per 4,500sqft of landscaped area

**PROCEDURE FOR DEVELOPING A STAFFING GUIDE:**

**For a 500- room luxury hotel,**

Step1. The productivity standard for guestroom attendants is 30 minutes (0.5 hours) to clean one guestroom. The labour hours required for room attendants at various occupancy levels of the hotel.

For 100% occupancy,

Rooms to clean next day = 500 x 1.0= 500 rooms

Labour hours to clean 500 rooms = 500 x 0.5 = 250 hours

At 90% occupancy,

Rooms to clean next day = 500 x 0.9= 450 rooms

Labour hours to clean 450 rooms = 450 x 0.5=225 hours

At 85 % occupancy,

Rooms to clean next day = 500 x 0.85= 425 rooms

Labour hours to clean 425 rooms =  $425 \times 0.5 = 213$  hours

Step 2. The productivity standard is 0.5 hours to clean 1 guestroom, a room attendant is expected to clean 16 guestrooms during 9 hours shift. The no. of full-time room attendants who must be scheduled at different occupancy levels can be determined by dividing the number of occupied rooms by 16.

At 100% occupancy,

Rooms to clean next day =  $500 \times 1.0 = 500$  rooms  
No. of full-time GRAs needed =  $500 \div 16 = 31.25$   
= 31 (rounded off)

At 90% occupancy,

Rooms to clean next day =  $500 \times 0.9 = 450$   
No. of full- time GRAs needed =  $450 \div 16 = 28.12$   
= 28 (rounded off)

At 85 % occupancy,

Rooms to clean next day =  $500 \times 0.85 = 425$   
No. of full- time GRAs needed =  $425 \div 16 = 26.56$   
= 27 (rounded off)

Step 3 The labour expenses for the room attendants should not exceed the calculated as follows:

The labour expenses is calculated for room attendants by multiplying the labour hours by the average hourly rate for room attendants. Assuming that the average hourly rate for room attendants is 10, the next day's labour expenses will be calculated as follows:

At 100% occupancy,

Labour hours of GRAs = 250 hours  
Labour expenses for GRAs per day =  $250 \times ₹10$   
= ₹ 2,500

- **PLANNING DUTY ROSTERS**

Duty rosters specify the allotment of jobs, hours of duty, and days off for each member of the staff.

To make for an even share of duties, the roster should be rotated every five weeks.



It should be simple in format, easy to interpret, clearly written, and displayed on the staff notice board at least a week in advance.

- **ADVANTAGES OF DUTY ROSTER:**

Planning a duty roster in advance helps to ensure -

1. The exact number of staff required to be on duty at any given occupancy.
2. That staff working hours are as per their employment contract.
3. That regular off-days are availed for enhancing productivity.
4. Knowledge of which employees are present on premises in instances of emergencies.
5. Accuracy in attendance and payroll reports.

- **STEPS IN MAKING A ROSTER:**

1. Step 1 ascertain occupancy levels and events expected in the hotel. This information is provided by the sales and marketing department at the beginning of the financial year.
2. Step 2 ascertain the spread of duty hours to be scheduled in the duty roster, whether 12 hours, 16 hours, or 24 hours. Decide whether the positions will work for 5 or 7 days per week.
3. Step 3 ascertain the type of shift- straight shift, break shift, rotating shift, or any other alternative scheduling – to be used.
4. Step 4 ascertain the number of full-time and part-time staff on the payroll.
5. Step 5 ascertain the number of labour hours per day and per week required for various positions.
6. Step 6 incorporate coffee breaks and meal time allowances in the roster.
7. Step 7 ascertain that each employee gets a weekly off day after 6 working days. Provide for compensatory offs. Schedule one reliever per 6 employees.
8. Step 8 ascertain closed days and restricted holidays, and any contingency planning that may be needed.

## Unit 2- Lesson 4

### LIGHTING AND LIGHTING FIXTURES

4.1 Lighting for different areas of the hotel

4.2 Functional and aesthetic aspects of light

- **Lighting & Lighting Fixtures**

Light is a form of energy without which there can be no vision.

Lighting is an important decorator and is one of the quicker ways of changing the atmosphere of the room. When light strikes an object it may be reflect absorb or allowed to pass through. Light levels are measured in terms of lumen. Lighting is both functional and decorative.

1) **Lumen**: the unit used for measuring the intensity of the light source.

2) **Lux**: the measure of illumination level 'on' the surface being illuminated.

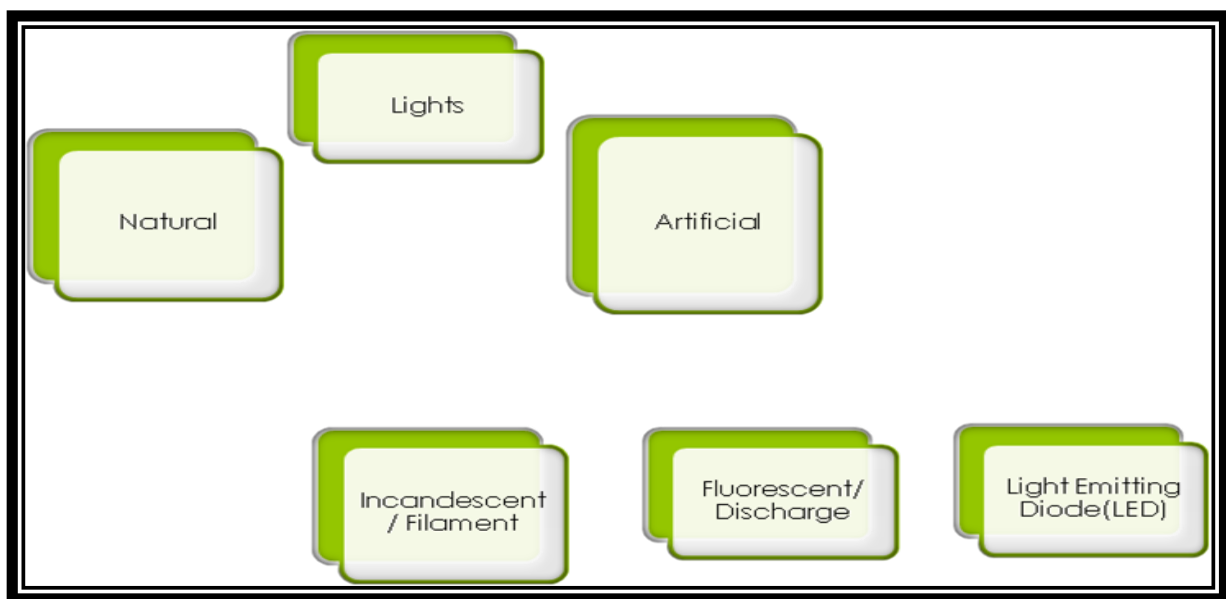
- **Importance of Lighting**

1. Light has a definite emotional effect and can be very stimulating. Light is exciting while darkness is depressing.
2. Proper lighting illuminates what we want to see. Light that is too bright exhausts physically and can be tiring.
3. Lighting thus plays both a functional and aesthetic role in a hotel.
4. Daylight is an important factor in the appearance of a room, so much so that no decor plans should be made without considering the amount of light that enters a room or is prevented from entering the room by the decor.
5. Artificial light is used to substitute as well as in association with daylight. It can also produce a harmonious effect throughout a room in addition to serving its basic function of producing visibility.
6. Light is also used as a contrast or to add emphasize by high lighting specific area.
7. Effective lighting has been a focus for improving the aesthetic of a hotel.

8. Many architects utilize lighting as prime tool in innovative design to bring out the ambience & quality of experience in the hotel especially in guest room.

▪ **TYPES OF LIGHT**

Light can be classified in many ways. The classification of light based on source is shown below.



• **SOURCE BASED CLASSIFICATION**

On the basis of source, light may be classified as natural or artificial light.

• **Natural Light:**

The bright radiant energy of the sun, daylight, is a major determining factor in the design of hotel guestrooms and homes, especially where large wall areas have been decorated with glass.

• **Artificial light:**

Well-planned artificial illumination helps us to see without helps to prevent accidents. It makes a vital contribution to the attractiveness of homes and hotels. At

night, much of a room's character is determined by artificial illuminated (light). This can be accomplished with the different types of lighting fixtures available.

Artificial light can be further classified depending upon the way it is produced and the way it is used.

On the basis of the way artificial light is produced, it can be classified into

1. Incandescent
2. Fluorescent

- **INCANDESCENT/ FILAMENT**

Here, light is produced by heating any material, usually metal to a temperature at which it glows. Typical incandescent bulbs have a tungsten filament in a sealed glass container. The advantage of this type of lighting is that the fixtures & bulbs cost less than the fixtures and tubes used in the fluorescent or discharge types.



- **FLUORESCENT/ DISCHARGE**

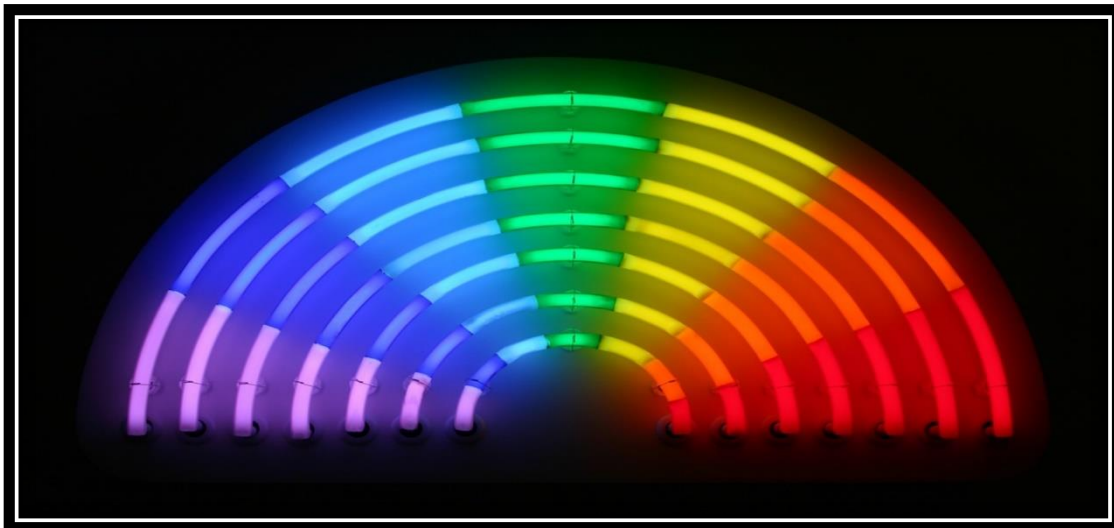
Fluorescent tubes are a luminescent or 'cold' (not produce heat) source of light. A glass tube with an inside coating of fluorescent powder with vaporized mercury and argon. The ends are then sealed with two cathodes. When the electric current activates the gases in it, invisible UV rays cause the fluorescent coating to produce visible light. Although fluorescent tubes come only in straight or circular shapes, they have considerable diversity in color. They also consume less energy than incandescent bulbs

- **LED (LIGHT EMITTING DIODE)**

A diode is a type a semi-conductor. In an LED, one side is called the n-type semiconductor. The other half is called P type and the boundary is called p-n junction.

- **NEON LIGHTS**

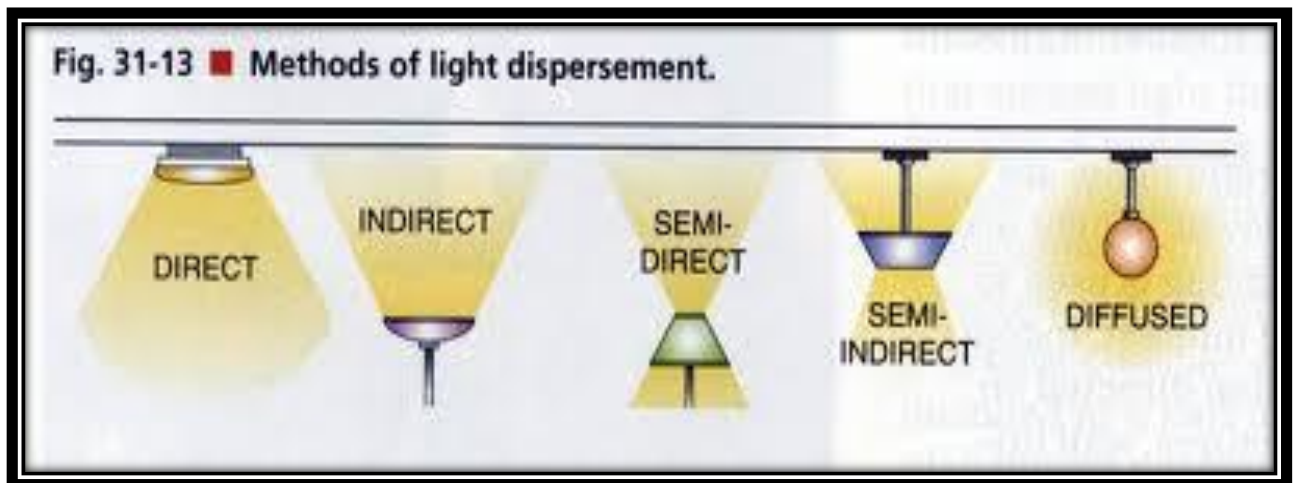
They are in the form of tubes but very low in efficiency. Neon lights are used for decorative purpose but at the same time it also play a functional role.



- **TYPES OF LIGHTING**

The type of lighting are classified by the manner in which the light rays are directed to the object to be illuminated

1. **Direct lighting**: This kind of light comes from sources such as ceiling fixtures or luminous ceilings that shed light downwards, or from lamps with translucent shades spreading light in all directions.



2. **Diffused lighting:** When light fittings are completely enclosed or concealed, as with some globes and ceiling panels, the light is diffused since it passes through the glass plastic. Diffused lighting is also glare-free and produces a flat appearance.



3. **Indirect lighting:** This is usually from concealed sources in alcoves, cornices, or valances. It may also come from a lamp with an opaque shade open only at the top-light is then thrown against the ceiling or washes against a wall and is reflected back into the room. It is softer than direct lighting, but often more costly in both installation and operation. When used imaginatively, though, indirect lighting can dramatize a space. Otherwise, it may be monotonous and needs to be combined with local lighting.

4. **Semi-indirect lighting**: It is possible to have some light passing through a diffusing bowl and some reflected off the ceiling where the fixture is open on top. This is called semi-indirect lighting.



- **FUNCTION BASED CLASSIFICATION OF LIGHTING:**

- **General or area Lighting:**

This illuminates the room more or less uniformly. It brings the design and colors of the whole space to equal attention. It minimizes the bulkiness of furniture, the darkness of shadows, and harsh contrasts.

- **Local or specific Lighting:** Specific activities at specific locations need specific lighting. Local lighting can be provided by lamps at strategic points. Fixtures attached to walls or the ceiling, under cabinets, alone or in multiples, are growing in popularity. Chandeliers are the most popular form of local lighting and are also highly decorative. This type lighting may be either by way of task lighting or accent lighting.

**Task lighting is for**

1. Reading or other close work
2. Sewing needlework, and other crafts of various kinds
3. Cooking, especially in areas where electrical appliances or knives are employed

<b>Filamentila</b>	<b>Fluorescent</b>	<b>LED</b>
The average life is 1,000 – 2,000 hours Low cost Low cost	The average life for a hot- cathode lamp is 5,000 hours and that for a cold – cathode type is 15,000 hours Initial installation cost high	The average life is 50,000 hours Initial investment is higher than both, but operating cost is much lower than them
Gives direct or diffused light of varying intensity	Gives diffused light with a flat appearance	Various options are available on the color of white light such as neutral white, warm white , and daylight white
Generates a considerable amount of heat and soils walls Can be used with many different types of shades and fittings	Operating temperature is much lower and does not cause any soils Does not enjoy the same demand ,so that fewer shades designed for these shapes are available	Heat generated is minimal and energy consumption is very low. A variety of fixtures is available for use of LED.
Ideal for pendant lights, spotlights ,table and floor lamps	Suitable for cornice lights, obscure corners, and concealed light	Extremely versatile, can be used architecturally in lighting.

**Characteristics of filament, fluorescent, and LED lamps**



**Accent lighting is for**

1. Highlighting a painting or other art object
2. Focusing on an architectural element
3. Illuminating a bank of plants not placed near a window
4. Breaking up a large room into 'islands' and making a small room appear to have several distinct areas, thus visually enlarging its space.

- **Safety Lighting:** As the name suggests, this type of bright lighting is used for safety reasons in areas such as stairways, along corridors, around swimming pools, and way of emergency lighting.

- **METHODS OF LIGHTING**

There are two methods of lighting used commonly-architectural and non-architectural lighting.

**Architectural and built-in Lighting:** This method of lighting supplies light that is functional and unobtrusive and is particularly good for contemporary rooms. It may be achieved in the following ways:

**Valance lighting:** A horizontal fluorescent tube is placed behind a valance board, casting light upwards so that it reflects off the ceiling and also downwards to shine on drapery, thus producing both indirect and direct lighting. Earlier it was made of wood but now days it is made of soft furnish



- **Cornice Lighting:** A cornice is installed under the ceiling, with a fixture hidden beneath so as to direct light downwards only. This can give a dramatic effect on drapery, pictures and wall coverings.



- **Cove lighting:** This consists of placing a continuous series of fluorescent tube in groove along one or more walls of a room, about 12 inches from the ceiling. The light reflects off the ceiling and bathes the room in indirect light.



- **Track lighting:** It consists of lamp fixed to the ceiling or wall in an array to offer great variety. One strip often holds spotlights, floodlights, and even hanging fixtures that may be turned around to follow furniture placements. The tracks can themselves be movable as well, for still more flexible arrangements.



- **Soffit lighting:** This refers to a built-in light source under a panel. It may be fixed to a ceiling or under a cabinet. Soffit lighting is often used over a sink or other work areas.
- **NON-ARCHITECTURAL LIGHTING**

These types include various fixtures and lamps.

- **Ceiling fixtures:** These have become common nowadays owing to vastly improved designs. Some are inconspicuously (unnoticeably) recessed (buried) into the ceiling or set flush with it. They may soften light with diffuse it with lenses. Some may be in the form of soft luminous panels that illuminate large areas evenly.
- **Wall fixtures:** These remain out of the way and free table and desk surfaces for other things. At the same time, they give direct light where it is needed.
- **Portable lamps:** Floor and table lamps can be moved when and where they are needed. They also act as decorative accessories. The placement of such fixtures affects the atmosphere of the room as a whole and the ease with which tasks can be done.
- **LIGHTING FIXTURES**

When buying lighting fixtures to implement a lighting scheme, their appearance and light produce should be satisfactory.

Shades, globes, and even lamp bases can look quite different when illuminated. They look good in both their daytime and night-time roles.

Translucent shades contribute a distinct color cast to their surroundings while opaque shades give localized pools of light rather than all-round illumination. The material chosen for the shade should not be discolored, faded or ruined by heat.

### Lighting Plans

A variety of lighting is necessary in most rooms and public areas. Provide first for efficiency and safety. Once that prerequisite has been met, you can customize the lighting features to highlight a room's appealing aspects, enhance colors, spark drama and interest, change moods and cozy up too-large spaces.

- **ENTRANCE AREAS AND LOBBIES**

The entrance of any establishment should look inviting and the lighting should be in keeping with the character and atmosphere of the place. Example chandelier, cove lighting. Wall brackets or pelmet-type can be used.

In the lobby, there should be areas of brighter light to attract guests' attention to such key points as the reception desk and to enable them to see clearly to sign the register.

- **RESTAURANTS AND PUBLIC AREAS.**

The atmosphere in a lounge should be one of comfort and restfulness. Sculptures or paintings can be highlighted using spotlights. Concealed uplighters can be used to dramatize foliage and around water features.

Subdued lighting goes well in restaurants and bars. But in cafeterias and coffee shops, in order to encourage a quick turnover, high degree of illumination, especially at the counters and tables, is necessary.

Chandeliers may look elegant in a banquet and dimmer switch to soften the mood. Placing a chandelier off-center or just over the buffet makes the room appear larger. Valance or cove lighting, recessed fixtures or spotlights over the buffet can supplement this general lighting source.

- **CORRIDORS AND STAIRCASES**

Subdued lighting may be required in the corridors, but gloom should be avoided. Guests must be able to see the room numbers clearly. Light fittings in the corridors should not be spaced should have 1 and 1/2 times their distance from the floor.

Stairs should be well lit to prevent accidents. Lights can be set into the steps themselves or along the walls, just below the handrail. If the lights are overhead, the appropriate switches should be duplicated at each end of each flight of stairs.

For safety reasons, lights for corridors, stairways, and fire exits should be left on during the night as well; also, there should be an emergency lighting system operated from an entirely independent supply.

- **GUESTROOMS**

Guestrooms do not necessarily require general lighting, but there should be adequate light in the different parts of the room. Switches must be easily accessible, especially near the entrance. Normally an energy – saver control panel, which doubles as a master switch, is placed here to be activated by a card key.

Bedside lights are provided beside the beds. To prevent the bedside lamp from tipping off the table, it can be screwed onto the bedside table or wall-mounted swivel – arm lamps can be used

Dressing table lamps should light the face of the person standing before it and not illuminate the mirror itself? Two lamps on either side of the mirror near head height are quite suitable. A light placed above the mirror can cast unattractive shadows under the eyes, nose, and chin.

For reading or writing, there should be good light that is adjustable, preferably from an angle poise-type desk lamp. A floor lamp can also be placed close to the sofa or arm-chair for reading purposes. If placed behind the reader, the bottom of the shade should be 47 inches above floor level; if placed beside, 42 inches is desirable.

If there is a painting or a picture in the room, this can be highlighted by using a spotlight.

Wardrobes can be illuminated using lights with no heat gain. The light must shine on the clothes and must be operated automatically using a door switch that turns the light on when the door is opened and shuts it off when the lock clicks into place.

In bathrooms, there should be vapor-proof fittings. The switches should preferably be outside the bathroom. Bare bulbs around the mirror give a clean, shadow-less illumination perfect for make-up. This can be flatteringly softened by hiding the bulbs behind

An opaque reflector. Adequate lighting must be provided in the shower area. A plug point must be provided for operating shavers and hair dryers as well.

- **PLANNING A LIGHTING SYSTEM**

Designing a lighting system is important for achieving efficiency and aesthetics in lighting. The following factors are involved in planning good lighting systems.

1. **Lighting requirements** the amount of light needed for a particular area.
2. **Design** Lighting are designed according to the function of an area.
3. **Durability** needs to be assessed before purchase.
4. **Ease of replacement** the lighting fixture purchased overseas need replacement. Fixtures should be checked and replaced by maintenance department.
5. **Ease of maintenance** Fixtures and fittings should be such that they are easy to clean and replace.
6. **Energy efficiency** Lighting fixtures, designs and lamps all should contribute to maximum energy efficiency.
7. **Heat gains** Heat gain refers to the amount of heat energy generated by the source of light which dissipates into the surrounding environment.
8. **Natural light** the lighting plan should be such that it fully utilizes the potential of daylight when available.
9. **Indirect effects of elements of designs** Colors and textures used in the area greatly influence the type and amount of lighting it needs. Different colors and textures reflect light to varied extents.
10. **Directional controls and reflectors** Materials such as mirrored glass, polished aluminum, and stainless steel surfaces used in decoration provide excellent means of directional controls and also act as efficient reflectors.
11. **Cost-effectiveness** Fluorescent lamps come at a high initial cost but have a high life-span On the other hand, incandescent lamps are low cost, but the average life is much lesser than the fluorescent lamps.

## Unit 2-Lesson 5

### WINDOWS AND WINDOW TREATMENT

#### 5.1 TYPES OF WINDOWS AND WINDOW TREATMENT

#### 5.2 SELECTION AND CARE

Windows have four practical functions. They admit air, vision, light & people to varying degree. How well they perform these functions is the result of their design placement & treatments. Their design may be hidden, improved, or accentuated by treatments such as curtains, draperies, shapes, & so on.

- **ASSESSMENT OF WINDOW**

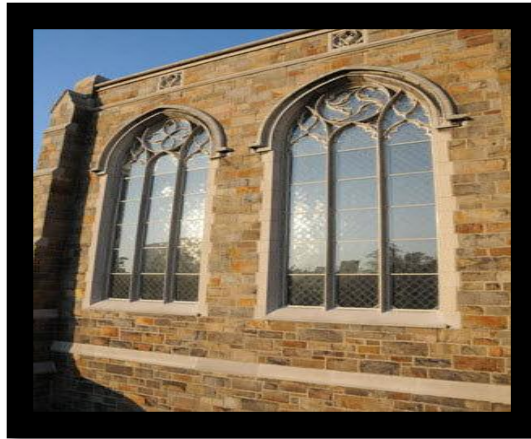
Any assessment of window should be taken into account the following considerations:

1. **View & Privacy:** Is there a view & if so should be an important factor in the interior design scheme. It can be enjoyed without loss of privacy in day time or at night? What are possibilities of ensuring privacy?
2. **Light:** Natural light is both cheerful & energy saving (artificial lighting sources also been more costly than free sunlight). Window treatment should provide optimal & flexible control of light by means of draperies, shades & so on.
3. **Ventilation:** Cross ventilation in rooms without air condition is a decisive factor for control.



- **TYPES OF WINDOWS**

- **Fixed Window:** They are meant for providing light & a view essential.



- **Movable Windows:** They combine the functions of providing light & a view with ventilation. Today, we often find a combination of two types in one unit.





- **Single Window:** A single window is the basic window with single frame. It opens either inside or outside



- **Double sashed Window:** This type of window has a sash that can be pushed up & down. Since the part with the glass pane is only half the size of the window frame, half of the window will always be left open.



- ✧ **Casement Window:** These are most common type of window. The window panes are in two halves that opens outwards from the frame. They are very good for illuminating a room naturally as they offer least obstruction to light. For inward- swinging casements, the furnishings or drapery chosen should not interfere with the window's operation.



- **Sliding Windows:** They consist of a pane of standard glass or polymer plastic, bound in vinyl or aluminum frames & built into a track system. They operate horizontally.



- **Pivot Windows:** They are made up of several glass panes set in a woodwork or metal frame. They are typically used for cross- ventilation purposes. Such a window may have one pane that pivots to the side, or they may all be fixed. They provide very good ventilation & light. The intensity of light let in can be controlled by tilting the panes.



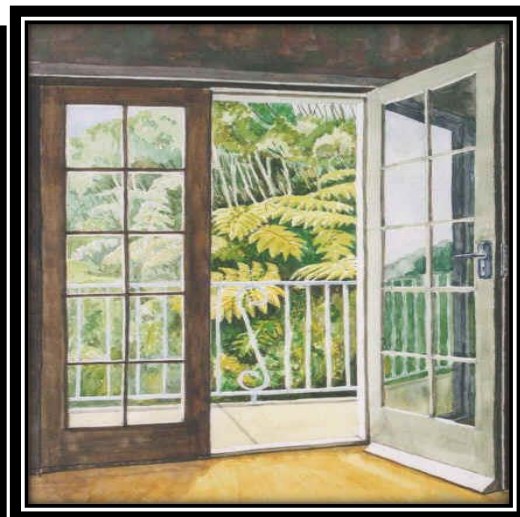
- ◇ **Sash Windows:** They are also called double hung windows. They consist of two glass panes both of which may open independently



- ✧ **Semi Circular ribbed window:** These are typically found on top of door way or large rectangular window. They are used for decorative & cross ventilation.



- ✧ **French Windows:** These are also called French doors, they open out in balconies. For a softer touch a traditional drapery treatment may be given to these windows; but the rods must extend beyond the frame so that the draperies can be drawn out of the way of the opening doors.



- ✧ **Corner Window:** Two identical window on two adjacent walls meet at corner in this type. Corner windows can treated as one unit or function separately. Drapes or vertical blinds should preferably be drawn towards the outside to let in maximum light whenever needed.



- ✧ **Bay Window:** These are three- dimensional windows made on three walls that meet to form an alcove protruding outwards. They are usually large & give the room an illusion of spaciousness, besides serving their functional purpose. These windows can be treated separately or as one. To give the effect of one large window, it is best to treat them as one. Another interesting option is to install drapes across the front of the window alcove, so that the window can be treated as a hidden seating area.



- ✧ **Bow Window:** These are made up of no of windows & each window has a smaller window within. This type of window helps to reduce the intensity of sunlight as a large pane is covered by wood work. They are similar to bay windows, but here the walls meet to form a curved alcove.



- ✧ **Picture Window:** These are large-paned fixed windows facing a picturesque view.



- ✧ **Clerestory Windows:** These are usually seen in basements, bathrooms, & some bedrooms where greater privacy is desired. To best dress these windows, consider the other elements in the room. One can use a fitted covering like shutter or a shade, or add visual interest with a vertical down-to-the-floor treatment.





- ✧ **Awnings:** These are windows that are hinged at the top & open upwards, at an angle.



- ✧ **Dalhousie:** These are windows provided with plantation- style shutters.

- ✧ **Palladian Windows:** These are windows with an arched top. To treat such shapely windows, flow with the curve or bend with the angle or, best of all, leave them untreated.



- ✧ **Skylights:** These are windows in the ceiling. They are basically there to allow in sunlight. They are left untreated. In case some treatment is required, custom-made, remote controlled shades are best.



- **Dormer Windows:** They provide in attics under slanting, gabled roofs, mainly to illuminate the rooms towards the middle of the building.



- **WINDOW TREATMENTS**

In essence window treatment are used to control the degree to which the window perform the various function. They have great design potential as a source of beauty & character too.

**A. Stiff Window Treatment**

There are many types of covering apart from curtains that can be used on windows to ensure privacy & block out light.

- **Blinds (Modes of Vinyl Materials):** Blinds are of the following types:
  1. **Roller Blinds:** These let in plenty of light when drawn up yet give complete privacy when unrolled & let down. They are made of thick fabrics used in conjunction with rollers



2. **Roman Blinds:** These are made of fabric attached to cords when cords are pulled the blinds rises up in according pleats to form a pelmet. They are heavier & warmer then roller blinds



3. **Venetian Blinds:** These actually originated in China, contrary to the name. They are made of parallel slats of wood or plastic aligned horizontally or vertically. These are popular for their almost complete control of air, light & view. They are usually low in price & some custom designed blinds come in different colors & patterns. The versions with very thin slats can have different colors on each side. Their major disadvantage is their affinity for dust & difficulty in cleaning them really well. The thin slatted & vertical versions do better in this respect.



4. **Vertical Blinds:** These are the most effective on large floor to ceiling window. They work on the same principal as the venetian blinds, expect that they close across the windows rather than down. The slats are wider than in the Venetian type, but less opaque. They may be made of sheer synthetic fabrics, canvas, silk, or thin wood slats.



5. **Pinoleum blinds:** These are an inexpensive covering for large windows. They are made from fine strips of wood held together by cotton, & let a pleasant, soft light filter through. They may be mounted on a spring- operated roller or moved up & down by cords.
6. **Balastore blinds:** These are inexpensive blinds made of strong paper fiber. It is accordion- pleated to act like a folding blind (similar to the venetian blinds) Balusters are perforated with small holes to let light through without glare.
7. **Pleatex Blinds:** These are made from stronger paper than balusters & have smaller pleats. The paper gives privacy, but let's sunlight through, which is filtered & tinted the color of paper. The four most common colors are orange, green, blue, & natural

8. **Austrian Blinds:** These are trimmed with gathers. They may be used partially raised & when fully raised they form a decorative pelmet. They are used in banquet halls & large lobbies for a sumptuous effect.



- **SHADES ( ROLLER ON TOP ON WHICH THE MATERIAL ROLLS UP)**
1. **Bamboo & woven Wood Shades:** These were once consider rustic & informal. They are available in different weaves nowadays. Slatted shades have an advantage in that they let through some light & air, & allow outwards- only visibility in the day time. They block inward view at the same time, depending on the tightness of the weave or the size of the slats. This should be remembered that this one way vision is reversed at night where indoor light are on.





2. **Fabric Roller shades:** These are inexpensive & can be flexibly adjusted to cover as much of the windows as required at a particular time. They can be translucent, letting in some light, or completely opaque. These shades are available in many colors, textures, & patterns, although neutral white or off-white, fairly smooth fabrics are the standard.



- **SHUTTERS:** These consist of movable wooden slates fixed on wooden framework in section they can provide varying degrees of privacy & light control. They act as a layer of indoor insulation over the glass window panes.



1. **Louvred shutters** are like lightweight doors made of overlapping wooden slats, spaced apart to let light through. For large window, they are made in hinged sections, which fold flat against one another to reveal the window opening. Although their initial cost is high, shutters last almost indefinitely. They are difficult to dust, but their woods is generally sealed against soils.
- **SCREEN:** These are in the form of hard board panels with panels of fabric stretched across the wooden frame. They are attached immovably to the window frame around edges & so do not allow much flexibility in control of light unless combined with another type of shutter & panes. There are now tracks that allow screens to be moved to one side when an unrestricted view is desired. The most popular screens in use nowadays are Shoji screens.



1. **Shoji Screens** are traditional Japanese screens for which modern interiors have a natural affinity (similarity). They are originally made of rice paper mounted on a wooden frame coated with black Polish, but they are now available in translucent plastic materials.



- **SOFT WINDOW TREATMENT**

Soft Window Treatment compromise curtains, valances, swags etc. Curtains often contribute more to the atmosphere of a room than other item of furnishing. Plain heavy curtains falling down to the floor can be used to create a formal setting. Short curtains made of light brightly preferred fabric are used to create informal setting & relaxed atmosphere. Apart from creating the desired atmosphere, Curtains give flexible control over privacy, heat light & noise to some extent noise

The various fabric used for making curtains are cotton, linen, rayon, glass fibers or silk for luxurious setting. Care should be taken to minimize the expo sure to sunlight & air borne soils as these reduce the curtains functional life.

Good curtains are usually lined & heavy curtain are interlined. The lining helps the curtains to drape well & protect them from sunlight & airborne dust.

**CURTAIN FULFILL SEVERAL IMPORTANT FUNCTION:**

- They give flexible control over privacy, heat & light.
- They soak up noise in proportion to the area they cover. The thickness of the fabric & depth of the folds.
- They can add color & pattern to the décor
- They can change apparent size of the room
- They can change the apparent size of a room or conceal architectural flaws.

• **TYPES OF CURTAINS:**

1. **Glass Curtains:** These are also called sheer or net curtains & are usually made of cotton or polyester. They appear in light pastel shades.





2. **Drapes or Over Curtains:** Draperies refer to loosely hung soft furnishing. These are made of heavier fabrics & may be lined. The heading is usually pitted. Draperies can be decorative, as well as providing privacy, darkening a room & insulating it against the cold.

**They may be used in following ways:**

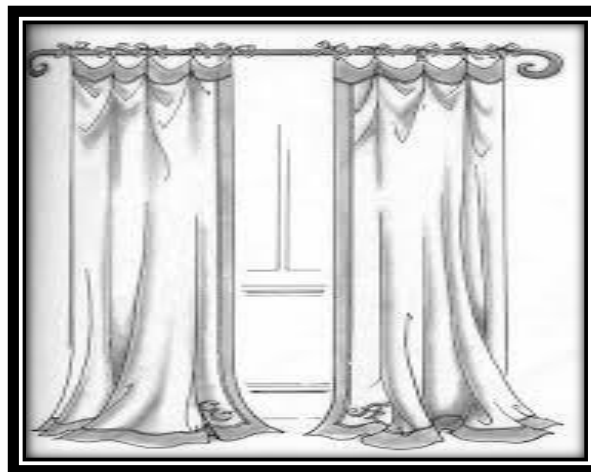
- Panel drapes: They cover only sides of a window area.
- Draw Drapes: These span the entire width of the window & can be drawn aside by means of a cord attached to the runners or by remote control.
- Straight- hung drapes: these can be used with a valances or a cornice, but the window will seem taller without a decorative heading.



3. **Sash curtains:** These are a type of glass curtain hung on the window sash. They can be stretched taut between rods along the top & bottom of the window sashes or hung in loose folds.



- 4. Draw Curtains:** These are usually made of translucent or opaque fabrics & are mounted on traverse rods. In earlier days, they were used between glass curtains & draperies, but these days they are more often used



- 5. Casement Curtains:** These cover the entire window & have casing at both top & bottom



- 6. Tie Back Curtains:** Either one panel can be tied back to one side or both the panels can be tied back to the two sides. Some are ruffled at the sides & the bottom. They are often tied back to the window frame. A pair of curtain looped back makes a window seem narrower than a single curtain tied back. Such curtains should preferably be tie back just below or above the mid-section of the window. Usually the higher the tie- back, the taller the window appears.



- 7. Criss Cross Curtain:** These curtain are a variation of tie back. Both the curtain panels overlap each other at top along the entire width of the window & then criss cross each other when they are tied back. Criss- cross curtain generally make a window seem wider. They also assure an impression of fullness.



- 8. French Café Curtains:** These cover only the lower part of the window with the casing slipped over a tension rod mounted in the window frame. They provide privacy at one level & light at another. These are ideal for informal setting



- 9. Cottage curtain:** These are combination of café curtain & tie back style curtain.





**10.Tier curtains:** These are double decker café curtain



**11.Roll ups:** These are shades made of a sturdy fabric & lined with contrasting fabric. The shades can be rolled or unrolled to desired position & held in place

by means of a sash. When rolled up the contrast colored lighting & top fabric are shown off together.

**12. Fold backs-** these are made up of sets of two double- sided shades hung across the entire width of the window on double curtain rods. They are then folded back to expose the contrasting under- panels & each panel is tied back.

- **CURTAIN HEADING & ACCESSORIES:**

The various headings & accessories used with curtains are as follows:

- 1. Pelmets & Cornices**

Cornices are box-like shapes used at the top horizontal portion of the drapery treatment to hide the poles & other hardware. They are generally 4 to 7 inches deep. The width of a cornice should be a little less than one- eighth of the overall length of floor- length drapery. They may be made of wood, plastic, or mirrored glass. Wooden cornices are the most frequently used & a plain wooden board with an interesting molding at the top & bottom is always in good taste. Wooden cornices may be finished in their natural colour, painted in some other colour, or covered, or covered with cloth, cork, or leather. Sometimes the coverings are edged in brass nails.

- 2. Valances:** They are made up of fabric that has been pleated, or ruffled. They should never exceed 1/6<sup>th</sup> of the window height & should be about 8-12 inches in depth. These shaped valances may be covered with cloth & edged with fringe.

- 3. Swags** are decorative drapery treatment to hide the curtain heading & usually taper to a cascade (also called as tail). These loop & fall luxuriously over a curtain pole, ending in elaborate tail. Heading of this type are appropriate for large formal room with large ceiling. They tend to look too heavy in small or heavy sized rooms. The depth of the swag at the center after it has been draped should be about one- seventh of the drapery length or one- seventh of the distance between the top of the frame & the floor.



### Valances



### Swags



## **Unit 2-Lesson 6**

### **WALL AND CEILING FINISHES**

6.1 Types

6.2 Selection

6.3 Care

### **WALL COVERINGS**

Wall coverings may be purely decorative, in which case the ability to bring color, pattern, texture, light or shade to the room may be of the greatest importance; on the other hand the covering may be required to give an easily cleaned and hygienic surface. The choice is very wide and the style should suit the purpose, the furnishings and the architectural aspects of the room however in all cases the wall covering must comply with the fire regulations. A large expanse of wall is noticeable and often there is less broken surface than on the floor, so wall coverings should blend with, rather than dominate, the general scheme. The need for warmer and more intimate interiors has led to the increasing use of textured wall coverings.

It is possible to introduce more than one type of wall covering into a room and colors, designs or materials can be used for focal points to add interest. Areas where there is likely to be the greatest wear and tear can have the most durable surface and a choice can then be made on account of resistance to abrasion, tearing etc., as well as frequent cleaning.

Wall coverings inevitably become very rubbed and scratched by the movement of chairs, the carrying of luggage, the banging of trolleys and the rubbing caused by people as they pass. It is possible to guard against the marking of the wall in various ways, for example by using a stronger and more easily cleaned material for the lower part of the wall, possibly up to 150 cm, which is called a dado, fixing narrow strips of wood to the floor or even to the wall, in such a way that chairs are not pushed right against the wall, using glass, Perspex or melamine plastics as a protective material invulnerable places, such as around light switches or walls against which people lean or which trolleys damage, fixing doorstops.

Generally, wall coverings may be cleaned by sweeping with a wall broom, vacuum cleaning with an appropriate attachment or washing with a sponge, warm water and



synthetic detergent and, finally, rinsing.

Wall coverings should be used on suitably prepared walls, which often involves quite a lot of work and this adds considerably to the labor costs as in some cases the preparation entails more labor than the actual application of the new covering. The curing of the cause of any dampness, the filling of cracks and holes, the removal of dirt and the build-up of old paint and old papers are but a few of the jobs involved in preparation.

- **TYPES OF WALLS.**

1. **Brick:** If Brick Walls are unpainted they can be covered in clear Sealant to prevent them from crumbling or becoming dust traps.
2. **Old Plaster:** Plaster is suitable for most wall coverings and paints. If the plaster is uneven or cracked use wallpaper or other covering materials.
3. **New Plaster:** It must be absolutely dry before decorating can begin, emulsion paint is better as it is least likely to blister and allows walls to breath.

- **TYPES OF WALL COVERING**

### **PAINTS**

Paint is used extensively as a decorative wall finish, but it is also used to preserve and protect structural surfaces, especially those of wood and metal; it can be used for identification of pipes, for the emphasis of hazards and danger points, and for hygiene, as paint facilitates the cleaning of surfaces.

As a wall covering paint offers a wide choice of types, colors and degrees of gloss, and even design if murals are painted on to the walls. Whatever covering is chosen for the walls, gloss paint is normally used as a protective coating for window frames and sills, doors and skirting boards and in many instances it gives a contrast in color and texture to the main wall finish, so contributing to the decor of the room.

Paint used for a wall finish is normally required for decoration rather than protection, but it also needs to be washable as paints tend to attract dust. (Stretch level dusting can in time become very noticeable and unless walls are washed from bottom to top, drip

marks result on the dry surface and these are difficult to remove later.)

Paint is relatively cheap, easily applied and cleaned; it can give textural and multicolored effects but it shows soiling (especially matt paints) and wall imperfections (especially gloss paints) more readily than other wall coverings. Although there are quick drying and low smelling paints, drying time and the lingering odor must be remembered when considering the time a room has to be 'off for redecoration. There are paints with special properties, eg insecticidal, fire retardant etc., and these may be used to advantage in certain places.

The main types of paints used as wall finishes are: emulsion; alkyd; multicolor; texture or 'plastic'; and micro porous.

Emulsion paints are water-thinned but are based on dispersions of synthetic resins (eg polyvinyl acetate) which dry to tough, washable and wear-resistant films. Emulsion paints are available in a wide range of colors and various degrees of sheen from matt to semi-gloss or silk finish. Being alkali-resistant they are suitable for use on new, possibly damp, plaster etc. They are quick drying and low in odor, and so are very suitable for the redecoration of rooms which cannot remain long out of use. Silk finishes are not recommended for bumpy walls or ceilings where a high level of light reflection can be unpleasant, but look good over walls lined with plain or textured paper.

Alkyd paints are based on synthetic (alkyd) resins combined with a vegetable oil, such as linseed oil. They have almost completely replaced the older types based on natural resins, although the latter are still used in primers and undercoating paints. Alkyd paints are generally easier to apply and have better durability and wearing properties than the older types. They have good opacity and excellent light fastness in a wide range of colors. Polyurethane and silicones are sometimes included to give a more scratch-resistant surface.

Alkyd paints are available as gloss, silk and flat finishes. Some types are supplied as non-drip or 'jelly' paints which permit heavy application for maximum obliteration. Oil-based silk paints are good for walls subjected to heavy wear and condensation.

- **WATER BASED PAINTS**

**1) Lime wash:** These are color washes based on lime (That is, Calcium Hydroxide, Ca (OH) 2) inorganic alkalis. Whitewash is a lime wash without Pigment. Glue, casein,

salt, alum, drying oil and Tallow are often used to increase the longevity of a lime wash.

2) **Distemper:** It may be defined as water based paint consisting of powdered chalk some coloring pigment and few other additives.

3) **Emulsion paint:** This type of paint is used as a decorative finish there are 3 types of emulsion paints polyvinyl acetate, styrene and acrylic resin.

4) **Silicate Paint:** This consists of a thin suspension of alkali resistant inorganic pigments. And extenders. It is not damaged by the alkali in cement.

5) **Cement Paint:** This type of paint consists of white cement alkali fast pigment accelerators and other additives. It is available in Dry powder and can be found in several shades.

- **SOLVENT BASED PAINTS.**

1. **Alkyd Paints:** These paints are based on synthetic resins combined with a vegetable oil, such as linseed oil.

2. **Aluminum Paints:** These are used for painting wood and metal surfaces. Aluminum powder forms the base in this type of paint. The base is held in suspension and bound by either drying spirit varnish or slow drying oil varnish to suit requirement.

3. **Anti-corrosive Paint:** These are generally used as metal protection paints for preserving structural steelwork against the adverse effects of fumes , acids, corrosive chemicals and ravages of rough weather.

4. **Asbestos Paints:** This type of paint is especially suitable for patching up or stopping leakage in metal roofs.

5. **Bituminous Paints:** These are alkali resistant and are chiefly used for painting exterior brickwork and plastered surfaces.

6. **Bronze Paints:** This type of paint is often used for painting interior or exterior metallic surfaces.

7. **Cellulose Paints:** This type of paint is made from celluloid sheets and amyl acetate substitutes. For making a superior type of paint nitro cotton is used.

8. **Casein Paints:** The protein casein is extracted from milk curds. It is mixed with

a base consisting of white pigment such as whiting, titanium, and lithopone and so on.

9. **Enamel paints:** This type of paint is made by adding pigments such as white lead or zinc white to a vehicle comprising a varnish.

10. **Oil Paints:** This type of paint can be used for almost all surfaces from woodwork and masonry to metal and fabrics.

Multi-color paints are usually dispersions of cellulosic colors in water. Each color is present in separate 'blobs' or 'spots', the resulting effect being dependent on the number of different colors, the degree of contrast between them, and the size and distribution of the 'spots'. Usually this type of paint must be spray-applied. It is extremely hardwearing and the multi-color effect helps to mask surface irregularities and imperfection. Corridors, entrance halls, hospital wards, cloakrooms and lavatories are ideal places in which to use this type of finish.

Texture or plastic 'paints are plaster-based and are intended to give a textured or relief effect on the surface. The texture is obtained by working over the material after application and, while it is still wet, using combs, palette knives, strippers, etc and much depends on the skill and taste of the operative. Some types are self-colored, others may require painting when they are dry.

A modern type of texture material is based on a heavy-bodied synthetic resin emulsion and may be applied by spray direct to concrete and similar surfaces, thus eliminating the need for plastering. Such coatings are very tough and hard wearing, and their principal usage is similar to that of the multi-color finishes.

Micro porous paints have a rubberized base which gives little gloss but offers elasticity, allowing movement when the surface expands or contracts.

### **Care and cleaning of painted surfaces**

1. Remove light dust with a wall broom or suction cleaner, working from the bottom up as dust tends to cling to the wall at downward angles.
2. Damp wipe or wash when necessary, with warm water and suitable detergent to remove heavily ingrained or tenacious dust and dirt. This is important on low sheen surfaces as dry cleaning tends to force dust into the surface.
3. When washing, start from the bottom and work upwards, using a sponge or distemper brush. Change the solution frequently. Rinse from the top downwards, using frequent changes of water. Sponge dry. Washing down is normally a

maintenance job. There are wall washing machines for large areas, eg in hospitals, and the solution is then released under pressure to hand-held tools.

- 4 Low sheen finishes, especially emulsion paints, may tend to 'polish up' if isolated areas of bad soiling are rubbed vigorously with a damp cloth. Clean such areas by very lightly scrubbing with a damp nail brush and a little fine scouring powder; the dirt should be removed without damage or 'polishing'.
- 5 Never apply wax polishes or oil to gloss painted surfaces to 'revive' them. The residues may cause subsequent paint coatings to peel, or fail to dry.
- 6 Do not use harsh abrasives, strong solvents or strong soda solutions to clean paintwork, or the film may be damaged or softened.

- **WALLPAPER**

Most wallpaper in the UK are made in rolls of 10 m x 53 cm, but many foreign ones vary in length and width. The price varies enormously, depending on the quality of the design and the materials used.

Wallpaper may be smooth or have a textured effect introduced. This may be done by the superimposing or interlayering of other substances to give a rough surface, or by clever designing when apparent depth (three-dimensional effect) may result. Smooth finishes are more resistant to dust than rough surfaces, but marks generally show more.

The pattern may be of many kinds: floral, geometric, abstract, striped etc., of two or more colors, and in many cases the pattern is an all-over design. The choice should depend on the aspect, height, size and use of the room. Vertical, horizontal, receding and advancing designs and colors can all affect the apparent architectural features of the room. Large patterned papers tend to overpower and make a small room appear smaller; they also cut to waste owing to the need to match the pattern.

Wallpapers have a warmer appearance than paint,

- are not normally applied to new walls,
- offer some sound insulation,
- become soiled, scratched and torn with abrasion,
- can have torn and peeling pieces stuck back,
- May be given protection in vulnerable places. Patterned and textured papers cover blemishes on the wall,
- cause problems when the walls are not 'true',
- Without careful use can be disturbing.

- Large patterned papers tend to overpower and make a small room look smaller,
- Cut to waste owing to the need to match patterns.

New walls are not normally papered at first as it is wiser to allow them to dry out completely. In order to withstand steamy atmospheres and be sponge able, suitable papers may be treated during manufacture or after application to the wall, thus making wallpaper suitable for almost any type of room except perhaps large kitchens, laundries and hospitals.

In addition to the conventional wallpapers there are now available many paper-backed materials, e.g. fabrics, wood veneers and plastics etc., which are hung in a similar way to the conventional papers. Some of these newer coverings are extremely resistant to scratching, tearing and cleaning, and may be considered as being too durable and too expensive for areas where the decor is likely to be changed frequently.

- **The main types of wallpaper are:**

- 1) **Lining Paper:** A preliminary covering of plain paper gives the wall an even porosity, which helps when painting or hanging the final wall covering.
- 2) **Surface Printed Papers:** The cheaper papers are called pulp. Higher quality papers known as grounded papers. Are given a coating of color before the design is printed on these.
- 3) **Washable Papers:** A transparent waterproof film stops moisture, including steam, from damaging the design.
- 4) **Embossed Papers:** The design is pressed into the paper to make it stand out in relief. This process produces wood like grain, imitation leather, and textile effect.
- 5) **Anaglypta:** Two layers of paper and cotton fiber are bonded together and embossed to produce Anaglyptic. These are available typically in white, but can be decorated with matt or silk finish emulsion paint.
- 6) **Supaglypta:** This strong, deeply molded cotton based is good for covering badly cracked walls and ceiling.

- 7) **Ingrained papers:** These coverings have oatmeal like texture which is useful for concealing a rough wall surface. Small wood chips and sawdust are bonded between two layers of paper during their manufacture.
- 8) **Lincrusta:** Linseed oil and fillers are bonded to backing paper to make lincrusta.
- 9) **Flock:** Design stand out in relief on such papers, which have a velvety pile.
10. **Japanese grass cloth:** This is made of dried grasses sewn close together and glued to a paper backing.

- **CLEANING OF WALLPAPERS**

1. Remove surface dust with a wall broom or suction cleaner (low suction for flock papers).
2. Remove marks by rubbing with a soft India rubber or a piece of soft bread. If the paper is sponge able, wipe with a damp cloth or sponge.
3. Attempt to remove grease with a proprietary grease absorber, although it may prove difficult to do so satisfactorily.

- **PLASTIC WALL COVERINGS**

Many types of plastic wall coverings are available. Some are more decorative than others and some afford sound insulation but all, owing to their abrasion resistance, are more hardwearing and more easily cleaned than most other wall coverings. They are obtainable in a variety of sizes, with a great price range, and many require special adhesives. As they are non-porous there is a greater tendency for the growth of molds so the adhesive should contain fungicides, or a fungicidal wash should be used on the wall prior to hanging the plastic wall covering.

**THE MAIN TYPES OF PLASTIC WALL COVERINGS ARE:**

1. **Paper-backed vinyl's:** Where the vinyl may have the appearance of almost any material, e.g. silk, tweed, hessian, cork, grass paper, wood, stone or brick, fabric-backed vinyl's, similar in appearance to the above and even more durable,
2. **Vinyl flock papers,**
3. **Plastic wall tiles:** Imitating ceramic tiles,
4. **Laminated plastic:** As veneer or surface boards. Melamine is the resin frequently used during the manufacture of these plastic laminates which may simulate wood paneling or fabrics e.g. Formica, Ware rite, etc.
5. **Expanded polystyrene:** In sheet or tile form, used on walls and ceilings to give heat and sound insulation, and to help eliminate condensation. It can be painted with emulsion paint or covered with paper. It is dissolved by spirit-based paints and thus before the use of oil paint it should be lined with paper and given a coat of emulsion paint to act as a buffer. There is a fire risk unless the polystyrene is treated.
6. **Clear Acrylic Plastic Sheeting:** Both the all-purpose and break resistant types are highly useful on walls inside elevators or in vulnerable spots in corridors where walls are continually being scuffed or marred.

● **CLEANING OF PLASTIC WALL COVERINGS**

1. Remove surface dust with wall broom or suction cleaner.
2. Damp wipe or wash, when necessary, with warm water and synthetic detergent. A soft brush may be used on these surfaces.

● **FABRIC WALL COVERINGS**

It is possible to cover a wall with any fabric and its durability will depend on the fibre and weave used in its manufacture. Fabrics may:

- be hung loosely or in folds which may cover ugly features,
- be attached to a frame secured to the wall,
- be paper backed or specially prepared so that they can actually be stuck to the wall,
- bring warmth and better acoustic properties to the area,
- have sound deadening properties which help against noise in adjoining Rooms



Fabrics chosen should not be liable to sag, buckle or stretch when hung permanently on the wall and should not collect excessive dust or dirt. Dust and the smell of smoke tend to cling to fabrics with a pile or rough surface more than to smooth fabrics.

Wild silk and other beautiful fabrics may be padded for heat and sound insulation but silks and tapestries are expensive wall coverings and thus are more usually found in luxury establishments while hessian, linen and some acetate/viscose fabrics are cheaper and used more extensively.

The word 'tapestry' is frequently misused and applied to cross stitch (gros point) work on chair seats and stools, whereas true tapestry is a woven fabric and when used as a wall covering generally depicts a scene and hangs loosely on the wall, eg the tapestry in Coventry Cathedral. It should be remembered that wool materials may be attacked by moth and adequate precautions taken.

- **CLEANING OF FABRIC WALL COVERINGS**

1. Remove surface dust with a brush or suction cleaner.
2. For the more beautiful hangings, dismantle when necessary and send to a firm of dry cleaners who specialize in this type of work.
3. Where hessian is stuck to the wall, scrub very lightly where necessary using warm water and synthetic detergent.

- **WOOD PANELING**

Woods used for paneling are usually hard, well-seasoned and of a decorative appearance, and they may cover the wall completely or form a dado. Wood

Paneling may be solid or veneered; it lasts years with little maintenance providing precautions are taken in respect of dry rot and woodworm, but the initial cost is high. Wood veneers may be stuck to paper, giving a similar effect to the solid wood at much less cost and veneered plywood paneling is also available. Wood paneling may be found in such places as entrance halls and staircases, assembly halls, boardrooms and restaurants.

- **CLEANING OF WOOD PANELING**

1. Remove surface dust with a wall broom, duster or suction cleaner and polish if necessary.

2. Where the paneling has become dirty or greasy wipe over with white spirit, or vinegar and water, and repolish.
3. Dark oak may be wiped over with beer.

- **GLASS WALL COVERINGS**

Glass can be used in the form of decorative tiles, sometimes in the form of mosaics, and the tiles should not be confused with glass bricks which allow the passage of light and form the wall itself. Colored opaque glass sheets or tiles may be used as a wall covering in hotel bathrooms.

Glass as a wall covering is frequently used in the form of mirror tiles which reflect light and can alter the apparent size of a room or corridor. Sometimes antique' mirror tiles are used, giving a duller surface with less reflection. Large unframed mirrors may cover part of a wall, e.g. over a vanity unit or dressing table, while large framed mirrors are sometimes found on the walls of corridors etc.

A glass-less mirror is available now which has the advantage of not misting up or shattering and is about one-fifth of the weight of a conventional mirror. It consists of a polyester film, vacuum coated with aluminum and mounted on a flat frame.

- **CLEANING OF GLASS WALL COVERINGS**

1. Dust or wipe with a damp chamois leather or scrim. Proprietary cleansers or methylated spirit may be used.
2. Care should be taken when cleaning mirrors that the backs do not become (damp)

- **METAL WALL COVERINGS**

Metals may be used for their decorative and their hygienic qualities. Metals such as copper and anodized aluminum are decorative and may be used for effect in such areas as bars, where the metal in combination with rows of bottles and interesting lighting can be most impressive. Other metals, usually stainless steel in the form of tiles, may be used in kitchens where they present a durable, easily cleaned hygienic surface in areas where splashing is likely. Metal skirting boards provide coved edges between wall and floor surfaces. Metal foil can be elegant if used sparingly as a wall covering;

it is available in a variety of colors.

- **CLEANING OF METAL WALL COVERINGS**

1. Dust or wipe with a damp cloth.
2. Polish is not necessary on metal surfaces as they either do not tarnish or will have been treated against it.

- **LEATHER (HIDE) WALL COVERINGS**

Leather wall coverings are extremely expensive and very decorative. They may be padded and studded with brass studs and they do not usually cover a complete wall surface. They may be found in luxury establishments in parts of the restaurants or bars, but are too expensive to be found in most places and, in these, the effects of leather where required may be simulated by plastics.

- **CLEANING OF LEATHER WALL COVERINGS**

1. Remove surface dust by dusting or careful suction cleaning.
2. Apply polish sparingly and rub up very well.

- **Cork:** This offers a dramatic & luxurious effect & is easily installed. Its chief virtue is sound control; its main disadvantage is its perishability.
- **Tiles:** Long relegated to outdoor areas or limited to kitchen & bathroom walls, tiles have finally come into their own again, with ceramic & mosaic patterns that brighten & create a cool, airy feeling in rooms being most popular. Generally easy to clean, the main drawback of tiles is that the grouting may become discolored or chipped tile tiles loosen. Feeling in rooms being most popular.
- **OTHER MATERIALS**

Many flooring materials can be used as wall coverings. They contribute different colors, patterns and textures, depending on the particular material. They are usually hardwearing, resistant to abrasion and initially rather expensive. Some of them are particularly hygienic, easily cleaned surfaces and found in such places as kitchens, cloakrooms and bathrooms.

Amongst the floorings used as wall coverings are:

- linoleum
- carpet

- marble
- terrazzo

- **SELECTION OF WALL COVERINGS**

The following factors should be borne in mind while selecting wall coverings.

1. **Durability**

Certain wall areas in hotels have greater wear and tear than other areas. Walls in areas like corridors tend to be rubbed, stained, and scratched very often due to movement of people, trolleys, luggage, chairs, and so on. In such areas durability of the wall covering material becomes a major concern. A dado is a stronger and more easily cleaned material for the lower part of the wall, up to 150 cm. Wall and skirting up to 10-20 cm is used to prevent damage to the lower part of the walls.

2. **Acoustics**

It refers to the sound absorption quality of a material. The ability of the wall covering material to reduce sound by absorbing it is the foremost selection factor when considering guest comfort in guestrooms, conference room, and other public areas. An acoustic rating called the Noise Reduction Coefficient (NRC) should be referred to aid selection of material. Wall covering range in NRC from 0.60 to 0.95. For instance, an NRC of 0.95 indicates that the wall covering absorbs 95 % of the sound waves that strike it.

3. **Appearance**

Wall coverings should be selected to enhance the image of the hotel. Wall coverings have a distinct decorative impact apart from being functional. Color, pattern, and texture of the material should be considered to suit the purpose, furnishing and architectural aspects of the room or area

4. **Fire safety**

Certain wall covering materials emit toxic gases when they burn. According to the fire regulations, use of such materials is forbidden in guest rooms and public areas in hotels. The wall covering must comply with fire regulations of the country. Many countries have fire codes that specify the use of only class 'A' materials in hotels. Class 'A' materials are those that rate from 0-5 on Flame Spread Index, which is a scale that measures how quickly flames will spread across the material's exposed finished surface. These wall coverings

may be made of inherently fire resistant materials or may be treated by the manufacturer with chemical finishes to make them fire retardant.

**5. Ease of maintenance**

The wall coverings should be of an easily cleaned and hygienic material.

**6. Maintenance cost**

Many a time, even though the initial costs of wall covering is high, the maintenance cost is negligible. On the other hand, the initial cost may be quite reasonable, but the maintenance cost will be very high. The daily maintenance cost should be considered while selecting wall coverings.

**7. Initial cost**

The product and installation cost should be within budgetary guidelines of the hotel.

**8. Maintenance of walls and wall covering**

Periodic cleaning of walls should be scheduled so that obstinate dust and grime do not settle in. Walls are to be maintained by the following cleaning schedules:

9. **Daily cleaning** – These methods include daily and weekly dusting and vacuuming.

10. **Spot removal** – This is done whenever the need arises to clean up a stain in specific places on the walls.

11. **Restorative cleaning** – This involves the use of detergents and solvents on a periodic basis. Before cleaning the walls, remove any pictures, mirrors, or accessories hung upon them. Push the furniture to the middle of the room and cover them with dust sheets. First wipe down the walls with a cloth-covered brush or a vacuum cleaner attachments for the purpose. Then remove cobwebs and dust bunnies by dusting from the bottom up.

When washing down painted walls or washable coverings, work from the bottom up. If dirty water run down a dry area of the painted wall or wall paper, the streaks may maybe difficult to remove. Wring out a sponge or cloth as dry as possible and clean a small area at a time –about 2 ft. Square –working in a circular motion. Finally, wipe the washed floor to ceiling section dry with a sponge wrung out in clean water, working from the top down. The move to area adjoining the area just cleaned. For both washable and non-washable surfaces, cleaning methods have been summarized in Table

## **CEILINGS**

Colour, pattern and texture can be introduced into ceilings. Like walls, ceilings have the ability to affect the space, light, heat and acoustic properties as well as the appearance of the room. It stands to reason that the manner in which the ceiling is treated should be in harmony with the general decor.

The original ceiling of a room is generally plastered and almost any material may be put on to this. The ceiling may be papered, painted, decorated with wood in the form of beams or close slats, covered with tiles, e.g. acoustic, insulating or glass (including mirror), and in some special areas highly decorative mosaics are found, as are other materials, eg nails used for decoration.

In some cases use can be made of louvered woods, bamboo canes or metal grilles, for example, and in other cases grass cloths and other papers and fabrics may be used.

In some rooms suspended ceilings are useful and it is possible to introduce two-level ceilings in one room. Suspended ceilings are normally sheets of material supported on some form of framework and they offer a good opportunity for decorative effects, although their purpose may be to hide ugly details, eg lighting and ventilating fittings, pipes, etc. They may give better proportions in the room or emphasize a particular area, provide better acoustics and form an interesting lighting effect, as well as being purely decorative.

Dust and cobwebs should be removed from ceilings with a wall (ceiling) broom and for high levels of hygiene ceilings should also be washed.

- **CEILINGS AND THEIR MAINTENANCE**

Often barely noticed unless a source of problems and sometimes sadly ignored as a design element, ceilings can affect the appearance, space, light, heat and acoustic properties of a room.

### **Ceilings Finishes**

Ceiling Finishes come in the following forms:

1. **Ceiling tiles**

These come in panel with choices of drop ceilings, tiles and planks.

**2. Drop ceiling panels**

These rest in a grid system suspended from the ceiling joists. The nature of the grid makes it easy to level any ceiling and offers the added benefit of easy access to pipes and wiring above the false ceiling thus created. Such ceiling panels are available in 2-ft squares and 4-ft square panels, in several different textures and styles.

**3. Tiles and planks**

These are mounted directly on the ceiling and offer a sleeker look than drop ceilings. Since the tiles are mounted directly, less head room is lost than with a drop ceiling too. These tiles come in 12- inch squares as well as planks in three sizes: 6 inches x 48 inches, 6 inches x 80 inches and 5 inches x 78 inches. They are available in various designs.

**4. Gypsum ceiling boards**

These are made from crushed gypsum sheathed in paper (smooth on the outward facing side and natural on the back). This is one of the most common ceiling coverings in use today. Gypsum gives the appearance of plaster without the need for lathed backing strips or the high degree of skill required to apply plaster. Gypsum boards are suitable for painting or for use as a base for popcorn ceilings and most other textured finishes.

**5. Popcorn ceilings**

These are usually formed as a thick coating applied to the ceiling board with a specialized texturing spray gun. The texture enables one to create the effect of plaster or stucco on ceilings and the coating material is thick enough to hide minor flaws.

**6. Textured paint**

This is a particularly thick form of paint, infused with particles to yield a textured or three dimensional effects. It also enables one to create the effect of plaster or stucco on ceilings. Three types of textured paint are available:

**7. Smooth texture**

This gives a stucco effect.

**8. Sand Texture**

This gives a slightly rough effect (like Sandpaper) because of added sand particles.

**9. Sand texture**

This gives a slightly rough effect (like sandpaper) because of added sand particles.

**10.Ceiling Texture**

This gives a ‘popcorn’ effect, much the same as the sprayed – on textured ceiling of that name.

11.**Textured paints** are for interior use only. A customized colour can be mixed or a white base can be painted upon after it is dry. An inexpensive applicator or a special texturizing paint on the ceiling surface.

**12.Ceiling paper**

Embossed papers are usually the best of the many types available for ceilings. All can be emulsion painted when the adhesive has dried. Papering ceilings is more difficult than papering walls, but sometimes it may be the only way to hide a cracked ceiling.

**13.Plank paneling**

This is a solid wood product usually milled from a larger stock. Most plank paneling has a tongue milled into one edge and groove milled into the other. This design makes it possible to nail through the tongue of one board and hide the nail under the groove of the next. Typically, plank paneling comes in widths of 2 1/2 to 8 inches and lengths up to 10 feet. Paneling made from different species of wood help provide just the right nuance for any aesthetic.

• **MAINTENANCE OF CEILINGS**

Ceilings should be freed of cobwebs and dust regularly. Wall brushes are convenient; but for lower ceilings, a vacuum cleaner with extension pipes and a suitable attachment is very effective. The latter removes the spiders too, so that they cannot produce webs again after a few days! Washing ceilings is usually a part of special projects or deep cleaning.



## **Unit No. 03**

### **7 Carpets and Floor Coverings**

7.1 Types

7.2 Selection

7.3 Care 15 15

### **8 Interior Designing**

8.1 Elements of design

8.2 Principles of design

8.3 Color schemes

## **Unit 3- Lesson 7**

### **CARPETS AND FLOOR COVERINGS**

- **CARPETS**

Modern manufacturing processes and the development of man-made fibers have revolutionized the carpet industry, making available carpets in a wide range of materials and textures. The quality of a carpet depends not only on the method of manufacture, but also on how well the carpet is made, the fibers used, the quality of that fiber, and the density of the pile. A good quality carpet should be able to withstand wear from constant footfalls, spillages, cigarette ash, and grit and also have the ability to recover from the effects of heavy or sharp furniture. Its shape and colour should be stable even if deep-cleaned or constantly exposed to sunlight. The pile should be dense and made from strong fibers, held firmly in position.

#### **Composition**

Carpets primarily have three components—an underlay, a backing, and a face or pile. The pile is held to the backing with knots (in the case of woven carpets) or with adhesives. An underlay is essential if a woven carpet is to be laid, but many manufacturing techniques provide carpets with backings of sufficient resilience to make an underlay unnecessary. A cross-section of a carpet, revealing its component parts.

#### **Underlay/Padding:**

Underlay or 'under-felt' acts as a shock absorber between the carpet backing and any unevenness in the sub-floor, which could cause the carpet pile to wear unevenly. It tends to make the carpet feel softer and more luxurious as well and helps it to absorb pressure from furniture, provide increased sound and heat insulation, and protect the carpet from rising dust and dirt. Underlays are made of plain needle felt material, impregnated felt-rubber foam, rubber foam with a jute or polyurethane backing, or a combination of needle felt and rubber foam.

An underlay may also be attached beneath the carpet backing, when it is referred to as the secondary backing, or it may be installed separately. Attached underlays make for quicker and easier laying of the carpet, reducing installation costs; but they are easily damaged by moisture. Separate underlays may be more expensive, but they last for many years and can easily be replaced.

**Backing:**

The primary backing is the one in which the pile of the carpet is anchored. It may be made of natural materials such as jute, hemp, or cotton; of synthetic materials such as polypropylene, nylon, various resins, or synthetic rubber; or of a combination of natural and synthetic materials. Normally, the primary backing has a back-size, a bonding material that may be of rubber, latex, plastic, or synthetic adhesives, which holds the fibers in place. The back-size is spread in a thin layer over the back of the primary backing and prevents the carpet tufts or loops from shifting or loosening after installation. A secondary backing sometimes laminated to the primary backing provides additional stability, improved shape and resilience, and more secure installation. These are not necessary for woven carpets.

**Pile:**

Also called the 'face' of the carpet, this is the part which is seen on the surface and walked on. Hence, it should be strong and resilient. The pile may be made of a blend of fibers or of exclusively synthetic or natural fibers (such as wool and cotton; silk is used in very expensive luxury carpets). The blends used are typically of wool and rayon; wool and cotton; wool, acrylic, and rayon; and so on. The synthetic fibers usually are polypropylene, polyester, and acrylic. The pile fibers' density, height, twist, and weave affect the carpet's resilience and durability. Carpets can be produced with several different kinds of pile. Variations in texture can be used as effectively as 'colour'.

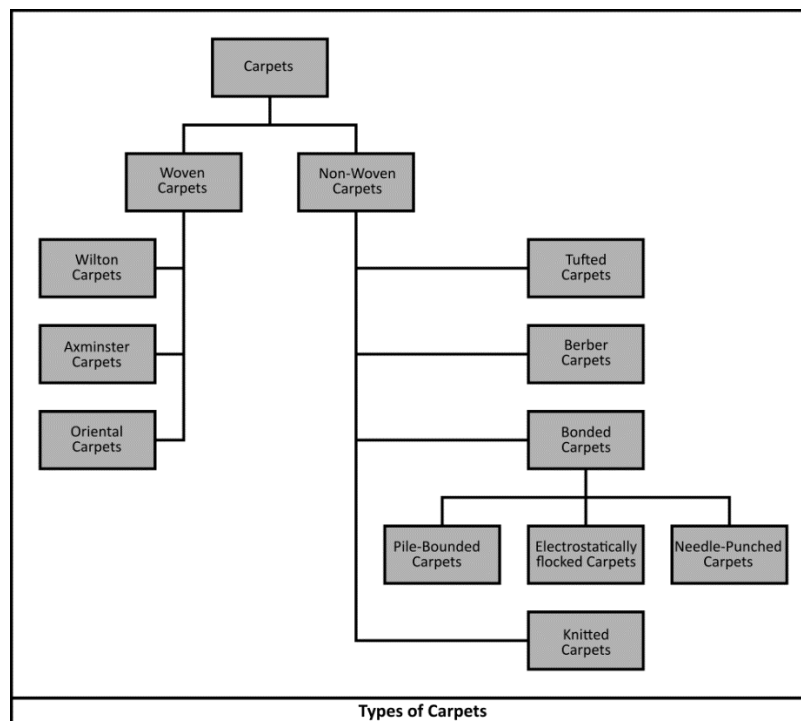
• **The different types of piles are:**

1. **Hard-twist Pile:** This is a cut pile with a heavy twist built into the yarn, giving it a pebbly look. It is used mainly in plain carpets, but it can be combined with other types of pile to give a textured effect. Hard-twist pile does not show shading and tracking like a velvet pile does. (Shading is the twisting of pile, caused by footfalls or the moving of heavy furniture, and shows up as dark patches. Tracking is the smoothing of the carpet in heavily used areas.)
2. **Looped pile:** The pile is uncut and is made up of a continuous series of loops. It can give various textures, from a thick and knobby pile to the closely curled

low-loop pile that is like an irregular cord carpet. Looped pile is used in Wilton and tufted carpets.

3. **Cut pile:** The loops of the pile are cut in such carpets. Tufted and woven carpets are produced in cut pile; in Axminster carpets, it is the only type of pile produced.
4. **Shag Pile:** This can be produced on a tufting machine or on a Wilton or Axminster loom. The pile is long and shaggy and has a luxurious look.
5. **Woven cord pile:** This type is produced on a Wilton loom. The pile is left uncut, giving a tight, corded effect. Most cord carpets are made of sisal or man-made fibers. If the fiber is of good quality, cord offers better resistance to wear than velvet pile.
6. **Velvet pile:** Sometimes called velour's, this is a close-cut pile that has a smooth, velvety appearance. It is used mainly for plain and two-tone carpets.
7. **Sculptured Pile:** A combination of cut and looped pile gives a carved or sculptured effect. Different lengths of cut pile and of straight and twisted pile can also be combined. These combinations are used mainly in Wilton and tufted carpets.

- **Types and Characteristics of Carpets**



- **Woven carpets**

Some of the highest-quality carpets are made by the weaving method. The pile and the backing are woven together here so that the pile is locked into position. The weave consists of warp and weft yarns interwoven to form the face pile and backing at the same time. The pile may be either cut or uncut. The uncut or looped woven carpets can take 5-10 per cent more wear. The advantage of woven carpets lies in the slight elasticity of the woven back. When correctly laid, the backing fibers hold the pile tufts erect so that they spring back after they have been walked on. Woven carpets are of three types: Wilton, Axminster, and Oriental. Wilton and Axminster are the names of the looms on which these types of carpets are woven. The main difference is that the Axminster loom allows any number of colours, as the threads are cut off and reintroduced according to the pattern. Woven carpets are more expensive than non-woven ones, but worth their cost since they are more durable. These carpets are used in reception areas, corridors, dining rooms, and bedrooms.

**Wilton carpets**

These may be produced as patterned, cord, Brussels, or plain.

***Patterned Wilton:*** These carpets are woven on a type of loom known as a Jacquard loom. This is an apparatus that produces patterns from coloured yarns. The pattern information is contained on perforated cards. The holes in the cards activate the mechanism that selects the colours to be raised to the pile surface. The jacquard draws up one coloured thread at a time (corresponding to a set pattern of perforations) to be drawn up to form the pile while the remaining threads are hidden in the backing of the carpet, giving added warmth, resilience, and strength to the carpet. Once the carpet is done, the pile is cut and closed. A textured effect is often created in such carpets by varying the height of the pile. No more than five colours are used, since the incorporation of more colours will result in a very bulky carpet.

***Plain Wilton:*** These carpets are made without adding the Jacquard apparatus to the loom. They have extra jute threads called ‘stuffers’ added to the backing to compensate for the lack of the spare coloured yarns as filling.

***Cord:*** These carpets are plain Wilton carpets with an uncut pile.

***Brussels:*** These carpets are patterned Wilton carpets that have an uncut pile.

### **Axminster carpets**

These carpets are woven in such a way that the pile is almost entirely on the surface. Each pile tuft is individually inserted into the backing, leaving no ‘dead’ threads to reinforce it. The pile is longer and less close than in Wilton carpets. The backing is very durable and has a distinct ribbed effect. There are three types of Axminster carpets:

***Spool Axminster:*** This is the most popular Axminster carpet and a single piece can have an unlimited number of colours in the pattern. The carpet is woven in such a way that the pattern is visible on the reverse side too.

***Gripper Axminster:*** This carpet is similar to the spool Axminster carpet, the only difference being the use of a maximum of eight colours, due to its method of creation.

***Chenille Axminster:*** In French, chenille refers to a ‘caterpillar’. The carpet is named thus since the pile surface is first produced as a long strip and then, during the weaving process, the catcher threads attach the strips of furry pile to the backing. The catcher threads are distinctly visible in the finished carpet, giving the pile a segmented look like a caterpillar. Chenille carpets are soft and thick, and are made in many colours and patterns.

### **Oriental carpets:**

These hand-woven carpets from the Middle East, Indian subcontinent, and the Far East are available in a variety of sizes, patterns, and colours. Based on the country of origin, they are called Chinese, Indian, Afghan, Persian, Caucasian, or Turkish carpets or rugs. Pakistan and Nepal also produce oriental carpets. With their rich history and colour, oriental carpets are often called the aristocrat of carpets. Carpet weaving areas can be divided into those using floral designs and those using geometric shapes and patterns. Floral patterns dominate in Persia and India. Persian carpets use dyes of vegetable origin. Many Persian carpets are made as wall coverings and prayer mats.

Caucasian and Turkoman carpets almost always employ geometric designs and when the rare floral pattern is used in these carpets, the design tends to be stylized and rectilinear. In Turkey, both floral and geometric designs are used, although the latter are more common. Chinese carpets are easily recognized by patterns that include dragons, monsters or exotic birds. All these carpets have a close, silky pile with a well-defined pattern. Oriental carpets are only made as carpet pieces that are standalone rectangles, and not ship or body carpets. They may be used as wall decorations also. The pile is usually of wool, silk, or a blend of these fibers. The weaving process involves stretching the warp threads on a loom and knotting the pile to these threads. When a row of knots is completed, a weft thread is inserted. Once the entire carpet is knotted, the pile is shorn. The precision of the design depends to a large extent on how tightly the carpet has been knotted and how short the pile has been cut the carpet's density, or number of knots per square inch, is a useful indicator of the fineness and durability of the carpet-the more the number of knots, the better the carpet. A fine oriental carpet will have more than 500-1000 knots per square inch.

- **Non-woven carpets**

These carpets are produced by attaching the surface pile to a pre-fabricated backing.

### **Tufted carpets**

These are available plain or patterned and are usually made of synthetic fibre blended with wool. The tufts are needled into a backing-usually made of polypropylene in sheet form, but sometimes made of hessian. The tufts are locked into place with a skim of latex along the back. Then either a foam layer or a secondary backing of woven jute or polypropylene is added. If a foam backing is used, an underlay is not required. The pile is either looped or cut (high or low, or perhaps a mixture of both). Tufted carpets do

not fray and may be cut to any shape. To the untrained eye, a tufted carpet may be indistinguishable from a woven carpet, however.

Shag pile carpets are usually single-colored tufted carpets with a long, luxurious pile. The pile can, however, look tangled and matted if it gets heavy wear. They are hard to maintain, too, since the long pile hides a lot of dust.

### **Berber carpets**

These carpets have short, nubby tufts. The pile is dense and looped, characteristically made from natural, undyed sheep's wool. They are available in natural neutrals such as white, off-white, fawn, beige, grey, and dark brown.

### **Bonded carpets**

These carpets are neither woven nor tufted. The one feature that distinguishes bonded carpets is that the materials used are glued, heat-fused, or in some other way 'bonded' together. They are all, therefore, typically manufactured from man-made fibres. A well-made bonded carpet is hard-wearing and makes an economical floor covering with good pile. Bonding can produce almost any effect, from completely flat to a corded or velvet pile.

***Bonded pile carpets:*** These generally have a pile of nylon or polypropylene, which is stuck to a PVC backing. Bonded pile carpets are also available as tiles. The dense pile has a firm anchorage and the carpets do not fray, seams can be bonded, and the carpets may be stuck to the floor.

***Electrostatically flocked carpets:*** Bonding is also used for flocked carpets, which have thousands of small fibres electrostatically bonded to an adhesive-coated backing.

***Needle-punched carpets:*** Another method of bonding is the needle punch or needle loom. In these carpets, a mixture of fibres is punched by needles and entangled through a backing fabric. This fabric is then impregnated with an acrylic resin to hold the fibres securely in the backing.

### **Knitted carpets**

These carpets are produced by interlacing yarns in a series of connected loops. As in woven carpets, the pile and backing are produced simultaneously. Multiple sets of needles interlace the pile, backing, and stitching yarns together in one operation.

- **Selection of Carpets**



The onus of maintaining carpets is on the housekeeping department, whether it is the daily cleaning or the longer term carpet cleaning schedule. It is therefore imperative that the executive housekeeper knows which types of carpets suit the purpose of various areas in the hotel and is also allowed a say in selecting carpets for the property. Once the types of carpets to be used are decided on, a specification sheet needs to be prepared for the dealer so that the right goods are delivered. The factors that go into the selection of an appropriate carpet are outlined in this section.

- **Size**

Though the available size of the carpet depends upon the weave or type of the carpet, it is essential that the right size is bought for the purpose and the area. For instance, economical wall-to-wall carpeting will be more suited to a banquet hall than carpet squares. Depending on their size, carpets may be categorized as follows

**Body or strip carpeting**

The narrow width of carpeting is known as a body width, and this is either 27 inches or 36 inches. Such carpeting has no borders so that the pattern can be matched when the strips are joined for laying down close-fitted or wall to-wall carpeting.

**Broadloom carpeting**

Carpets that are available in a width wider than body/strip width are known as broadloom. The most common widths are 9 ft., 12 ft., and 15 ft. Some broadloom carpets are also available in a width of 18 ft. Tufted broadloom carpets are made in widths of 9 ft. 10<sup>1/2</sup> inches or 13 ft. 10<sup>1/2</sup> inches. Broadloom is a good choice for a fitted carpet if there is a width corresponding closely to one of the measurements of the room, and the room is of a regular shape.

**Carpet squares**

These are loose carpet quadrangles with all their edges neatened. The advantage of carpet squares is that they can be turned round to even out wear. Carpet 'Squares' are not necessarily square, however. Their size is usually more than 6 ft. 9 inches x 4 ft. , and they are often either 12 ft. squares or 9 ft. x 12 ft. rectangles. 'Squares' are also made up from 12 ft. lengths of broadloom with the edges bound.

**Carpet tiles**

These range from 9 inches square to 20 inches square. A popular size is the 12-inch square. These tiles are sold in packs of nine, and can be laid down loose or stuck down. Some have a self-adhesive backing that makes them easy to lay and allows them to be removed if necessary. Some tiles form a pattern when properly oriented against others; others are of plain carpeting.

### **Stair carpets**

They usually come in widths of 18 inches and 22 inches they may be plain or have a patterned or colored border.

### **Rugs and mats**

These are normally oblong and should be less than 6 ft. 9 inches x 4 ft. with all their edges neatened. Rugs and mats can be placed in areas of heavy use to save wear on the carpet.

- **Purpose**

Manufacturers usually classify their carpets according to the purpose for which they are recommended. The six common categories are:

**Light domestic use:** These are for bedrooms and other rooms that see light use in homes.

**Light contract use/medium domestic use:** These are for medium use in hotels and for home bedrooms exposed to light use.

**Medium contract use/general domestic use:** These are for general use in the home and for hotel bedrooms or public rooms that see medium use.

**General contract use/heavy domestic use:** These are for living rooms, halls, stairs, and other parts of the home where there is heavy use and for banquet halls and public areas in hotels, restaurants, and office buildings.

**Heavy contract use:** These are for public areas that see heavy use, such as shops.

- **Luxury**

These are of better quality than category 3, but are not suitable for general use. The hotel lobby is an area where there is a lot of guest traffic. Hence, a good quality hard-wearing carpet is needed if it is to look good and withstand heavy wear for many years. An Axminster made of 80 per cent wool and 20 per cent nylon in dirt-masking colours and patterns would be a good choice. A plain Wilton or tufted carpet would be more suitable for a lounge

For dining areas, an acrylic pile carpet is practical, as stains caused by food spills can be easily removed from these. If liquid spills in particular are likely, choose either a polypropylene carpet, which is easily wiped clean, or an inexpensive carpet with a short life.

A staircase needs a carpet that is hard-wearing, with a surface that is safe, and a good quality pile carpet fulfils both these requirements. Cord, needle felt, and sisal provide hard ware at low cost. However, Wilton cord is the ideal choice here since it is very resilient and allows the feet a good grip.

Less expensive carpets for light contract use can be used in bedrooms, since they get only light wear. A room used as a study-cum-bedroom or bed-sit will need a high quality carpet though, similar to that suitable to a living room, or a cheap carpet that can be replaced when the use of the room changes.

Most hotels do not place carpets in bathrooms, except in a few luxury rooms the main hazard for a bathroom carpet is water. If the floor is likely to become wet polypropylene carpet with a polypropylene backing is recommended. In this case, it is unwise to use underlay or have a foam backing, as water may seep down the skirting into the underlay. A low-priced nylon or acrylic carpet would be suitable if the floor does not get too wet.

- **Construction**

The surface pile, the way the pile is anchored to the carpet, and the type of backing are important selection criteria for carpets. Tufted carpets can be produced at a faster rate than woven ones because of the method of fabrication. Where a distinct pattern with several colors is desired, a woven carpet may be preferred instead, however. Needle punched carpets are used for outdoor installations, whereas flocked carpets are useful in wet areas since they are water resistant.

- **Pile density and weight**

Any carpet, whatever the making, can be made to resist compression despite traffic, abrasion, soil being ground in, repeated vacuuming, and cleaning if there are sufficient pile yarns in the carpet. How well any carpet performs is mainly a matter of the density of the pile, and this in turn is a function of many characteristics – the gauge, pitch, pile height, stitches per inch, pile weight, yarn size, and so on. Average pile density is the weight is the weight of pile yarn in a cubic yard of carpet. It is calculated by taking the pile weight, multiplying that by 36, and dividing that product by the pile height (in inches)

**AVERAGE PILE DENSITY =  $36 \times \text{FACE WEIGHT} \div \text{PILE HEIGHT}$**

In tufted carpets, the number of pile yarns in the wrap (ends; across the width) is expressed as a gauge. Gauge is given as the number of needles or tufts per width-wise inch expressed in fractions. A medium weight carpet has a gauge of 1/8 and a heavy duty carpet has a gauge of 5/64. The numerator indicates the number of inches and the denominator the number of tufts. Thus, 1/8 gauge means that there are 8 tufts across the inch, while 5/64 gauge means that there are 64 tufts in 5 inches, or 12.8 tufts per inch.

In woven goods, the term pitch indicates the number of wrap yarns in a 27 inch width of carpet. For instance, the standard pitch for a wilton is 256. To convert gauge to pitch, multiply the number of ends per inch  $\times 27$ . Similarly, 1/8 gauge is 8 ends of yarn per inch  $\times 27 = 216$  pitch

The number of tufts per lengthwise inch is expressed in rows for axminster and wires for wiltons. This may vary from 4 in an inexpensive carpet to 13 in a densely woven luxury carpet.

Yarn or face weight refers to the amount of fibre (per square yard) that is in the face of the carpet (total weight less the weight of the backing). However, this is different from density because tall, less density tufts will be more resistant to wear the matting. So the greater the weight, the more durable the carpet.

- **Pile height and size**

The length, thickness, and ply of the pile yarn affect the weight of the carpet and ultimately help determine its wear. Pile height is the measurement (usually in fractions of an inch) of the pile of a carpet, from the base of the primary backing to the tip of the yarn. On staircases, a longer pile is sometimes better than a low, looped pile, because there is less parting of the yarns on the stair edges. A multi-level, multi-yarn surface available in modern carpets is appealing as well; it also helps to conceal soiling and stains. Earlier, shag piles were considered a luxury feature, but now the pile height for hotel rooms is decreasing to 'plush', a moderately long pile that is far denser than the most shags. The lower the pile, the denser the weave or tufting should

be. Lower pile is much easier to maintain, even though it is considered less glamorous.

- **Pile fibre**

Earlier, wool was the dominant fibre for carpet piles. Wool is soft and resilient, resists abrasion and soiling, has natural flame- retardant properties, feels warm, and retains its appearance well if maintained properly. It has some drawbacks, however.

Wool is expensive and suffers from high static generation. With the advent of various man-made fibres, blends have thus become a popular choice for piles fibres. The blends used are wool and nylon (80/20), polypropylene and acrylic (50/50) and acrylic and rayon (50/50). Characteristics of different pile fibres are given in table 25.3.

- **Resilience**

The resilience of a carpet refers to the ability of the pile to recover its original appearance and thickness after being subjected to compressive forces or crushing under traffic. In a hotel guestroom, warmth and comfort are important for guests walking in bare feet or in light slippers. The pile yarn for guestroom carpets should have a more inviting, softer feel than those in busy foyers, lobbies, or corridors.

- **Dyeing**

Color can be introduced at different stages of manufacture in both tufted and woven carpets of manmade or natural fibres. The various methods of dyeing fibres or yarns for use as carpet pile has been outlined in chapter 16. If colours must last in strong sunlight or through heavy wear, dope or solution dyeing is ideal. In the process of dope dyeing man-made fibres are spun from a coloured solution. Thus, the filament is completely impregnated with the pigment.

With improved dyes, fading is now a common problem in carpets. A fade o meter is a standard laboratory device for testing a fabrics fastness to sunlight. Other problems related to dyeing in carpets are crocking and bleeding. Crocking refers to the colour rubbing off as a result of improper dyeing, use of insufficient mordant, or due to poor quality dyestuffs.

- **Aesthetics**

This refers primarily to the colour, texture, and pattern of the carpet. A spacious lobby or an enormous bathroom should have a carpet with a big, busy pattern. Remember, however, that intricate patterns can withstand lack of maintenance better than solid colours.

If the purpose is to help people relax and introduce a quite air, then cool blues and greens are suitable, usually in darker shades. In dining areas, carpets should not have distinct, precise design motifs; rather they should have vague, mottled patterns that will not show stains left from spills. In heavy footfall lanes or near busy elevators or foyers, the hardest of all carpets should be specified.

- **Backings**

A good carpet should have a firm backing. The secondary backing gives the carpet dimensional stability, so that it resists stretching from foot traffic or from carts being pulled across it. A foam backing of 1/8 to 1/4 inch thickness may be added to the primary backing to serve as a self-cushion and to eliminate the need for separate padding.

- **Underlay/padding**

The selection of proper underlay is as complex as choosing the right carpet. In high traffic areas, carpets are often glued directly to the floor. Installing carpets in this way may help carpets withstand wear upto 25 per cent longer, since friction and air pockets are eliminated. But if comfort and luxury are desired, a resilient underlay is called for. An ideal underlay, properly installed, with a quality carpet and good backing, can prolong the carpet's life by softening the intensity of abrasion. Underlays also provide extra insulation against extremes of cold and heat, and act as an acoustic-dampening layer. It is important to select a moth and mildew-proof underlay.

- **Reputation of dealer**

Carpets are expensive and their installation needs a lot of skill. It is always wiser to deal with reputed manufacturers, dealers, and installers who have the advantage of guaranteed quality and experience in carpeting. The guarantee of the carpet's quality durability should range from 5-10 years. The supplier should discuss the maintenance needs of the carpeting provided with the housekeeper and, if required, should provide training to the housekeeping employees involved in carpet maintenance.

- **Installation of Carpet**

Housekeepers and housekeeping supervisors should be familiar with the methods of carpet installation, even though the actual installation is best carried out by an experienced installer. The installation methods may be semi-permanent or temporary.

**Semi-permanent methods**

Some semi-permanent methods of carpet installation are discussed here.

1. **Stretch-in:** In this type of installation, the carpet is stretched over a separate underlay onto narrow tack-less strips or grippers of wood with protruding tacks. The strips have two up three rows of nails, angled up towards the walls, to which the carpet backing is attached during installation. Such strips can be dangerous when exposed, however. Stretch-in installation may provide greater cushioning and spring, higher thermal insulation, and superior acoustical advantages (due to a higher noise reduction coefficient), especially when installed with an appropriate underlay. Stretch-in installation should be avoided, however, where the carpet may experience heavy movement of furniture or fixtures. It also should not be used on ramps or inclines, in places where there is excessive humidity, or where the carpet selected has a special backing designed only for glue-down installation.
2. **Turn-and-tack:** The edge of the carpet is turned under like a hem and then tacked into position. Unless well fitted, this method can cause unevenness, which naps dust.
3. **Sunken:** This method may be used where there is a change in floor levels. The carpet is placed into a 'well' and edged with metal or wood strips to even out the floor surface.
4. **Glue-down:** This is more permanent than the other methods. It is usually used with rubber or foam-backed carpets and can cause early wear unless the sub-floor is very even. The method employed may be direct glue-down or double glue-down. In the direct glue-down method, the carpet is adhered directly to

the floor. In the double glue-down method, the underlay is adhered to the floor first, and then the carpet is glued to the underlay.

The glue-down method is suitable for most areas, including ramps and heavy-traffic areas. The seams are durable (but more difficult to repair than with the stretch-in method) and there are no restrictions on the size of the area to be carpeted. Special borders or customized design features can be executed with glue-down installation, and the glue-down method is usually less expensive than other semi-permanent methods.

### **5. Temporary methods**

These usually involve the addition of tape sewn round the edges of the carpet. This tape may contain pegs, hooks, press studs, or velcro strips, which attach themselves to corresponding sockets, loops, or hooks affixed to the floor surface immediately beneath the carpet. Sometimes the carpet is edged with rubber so that it will simply lie firmly in place without any additional anchorage.

#### **• Care and Maintenance of Carpets**

A regular maintenance programme is a must for carpets, since they are easily soiled or damaged. Good maintenance can increase the life of a carpet considerably.

Most new carpets shed fluff for the first few weeks. During this period, they should be only lightly cleaned with a hand brush or carpet sweeper. Cut off any tufts that stand up noticeably above the surface-do not pull them out.

After the first month, clean with a vacuum cleaner at least once a week, always making the last stroke in the direction of the pile, so that it lies flat. To even out wear on the carpet, move furniture around occasionally so that indented pile can be brushed up. Avoid dragging heavy furniture over carpets, as this damages the fibres. Parts that receive wear, such as in front door, can be protected by rugs

#### **• Routine maintenance**



This involves the daily removal of dust and dirt from the carpet. The removal of dust may be carried out using a dry-suction vacuum cleaner or a carpet sweeper. Care should be taken to clean the surrounding areas around the carpet too.

- **Periodic maintenance**

This involves deep cleaning of the carpet. The executive housekeeper should prepare a periodic schedule for this. The practice of carrying out a deep cleaning only when the dust and dirt become obviously visible is detrimental to carpets. In many properties, carpet cleaning is contracted out because of the specialized equipment and skills required. Deep cleaning of carpets can be carried out by three different methods: shampooing, hot water extraction, and dry powdering.

1. **Shampooing:** Carpet shampoo machines use one of the two types of shampoos: liquid and dry foam. Shampoos are anionic synthetic detergents and should be diluted in the correct measures for optimal performance. Liquid shampoos produce very little foam but tend to leave a residue that traps dirt, making it necessary to shampoo the carpet frequently. Dry foam shampoos are actually also liquids, but they leave a dry foam on the surface of the carpet after application-hence the name. The foam loosens and lifts out the dirt, holding it on the surface of the pile until it can be removed by dry suction. Dry foam shampoos contain some solvent in addition to the detergent to assist in the removal of solvent-soluble dirt. Carpets cleaned with a dry-foam shampoo require less drying time as well. Carpet shampoo machines are used to dispense both types of shampoos. A cylindrical brush works the foam into the pile of the carpet.
2. **Hot-water extraction:** This is done by a hot-water extraction machine. The machine uses a shampoo solution that does not form foam. It injects the solution under high pressure through the pile to the back of the carpet, where it emulsifies and loosens dirt and grease. Simultaneously, the machine sucks up the solution along with the now-suspended dirt and grease. The use of a wet-suction machine after shampooing greatly accelerates the drying time. The dirty solution is deposited into a tank, from which it is discarded later. After the cleaning process, the carpet is left slightly damp and requires a very short drying time.

3. **Dry powdering:** In this method, a powder containing absorbents such as sawdust, solvents, and drying agents is sprinkled on the carpet and left for several minutes. The powder absorbs the grease and dirt, and is removed with the help of a dry-suction cleaner. Waterborne dirt is not removed by use of such a powder, therefore this method is not very efficient. The method cannot be strictly considered a deep-cleaning method in fact, and should be used only in conjunction with the other carpet-cleaning methods

## **Unit 3- Lesson 8**

### **INTERIOR DESIGNING**

- **INTRODUCTION**

Interior design is the orderly arrangement of lines, forms, colors textures etc., to create beauty in interiors. A good design shows an orderly arrangement of the materials used and in addition, creates beauty in the finished product. Interior decoration can be a highly personal form of self-expression – the sum of one’s interests as an individual or as a group- as well as a practical statement created by combining various elements of art using certain design principles.

- **OBJECTIVES OF INTERIOR DESIGN**

The objective if interior design and decoration is to achieve beauty, expressiveness, and functionalism.

1. **Beauty**: whenever one says that something is aesthetic, one usually implies that a beautiful piece has been created. Beauty is not the only objective in planning and furnishing accommodation areas, in addition the areas should express an idea and most important of all, should function effectively.
2. **Expressiveness**: an important way to approach the subject of selecting, decorating and furnishing an area is to express some definite idea or theme in it. These themes could be naturalness, sophistication, formality, royalty, warmth, coolness, freshness, antiquity and so on.
3. **Functionalism**: an accommodation product should “work”. Its spaces and furniture should serve the purpose for which they are intended. For eg. Social spaces in the guestroom are for group interaction, so seating should be comfortable, storage convenient, lighting ample and air conditioning optimal and appropriate functional and work spaces organized for efficiency.

- **TYPES OF DESIGN**

There are basic two types of designs:

1. **Structural design:** it denotes the structure or construction of objects. This is comprised of the size, form, color, and texture of an object, be it the object itself or the drawing of the object worked out on paper. (basic structures like walls, beams, ceiling)
2. **Decorative design:** this is the surface enrichment of structural design. Any lines, color, or materials that have been applied to structural design for the purpose of adding a richer quality to it constitute its decorative design. (design to create beauty)

- **ELEMENTS OF DESIGN**

These are primarily the visual components used in creating a design or a composition. The elements that are basic to all visual designs are line, form, colour and texture.

1. **Line:** this is a very important element in planning and furnishing. It is the most basic design element. Lines have a positive emotional significance, depending on their direction and quality. The different types of lines are vertical, horizontal, diagonal and curved lines.
2. **Form:** the term form is applied to three dimensional areas and objects, whereas shape may refer to a two dimensional one. Hence, we can have a triangular shape and a pyramidal form with a square shape. Without the beauty of form, good texture, colour, or decoration can be of no use. However, a particular chair is not well designed unless it accommodates itself to the human form. The form of an object should thus suit its function.
3. **Texture:** the word texture refers to the tactile quality of the surface of any object or area. It refers to the surface quality- how something feels when we touch it and how it behaves when light strikes it. In other words, the roughness or smoothness of a surface is referred to as texture. Texture plays an important part in interiors because it affects the quality and quantity of light reflected by the surface. Some terms used to describe textures are given below: coarse, crystalline, dull, fine, marbled, metallic, glassy, glossy, polished, porous, etc.
4. **Colour:** the appeal of colour is universal. Its perception occurs because objects reflect or transmit light that enters the eye. Light rays that vary in wavelength

and rates of vibration produce different sensations and appear as different colours.

**Dimensions (characteristics) of colour: there are three dimensions of colour**

- **Hue:** this term indicates the name of the colour such as red, blue, green etc. an object appears black when all the wavelengths are absorbed and white when all are reflected. Although the words ‘colour’ and ‘hue’ are used interchangeably, colour is a general term and hue is a specific term referring to definite identifiable colours.
  - **Value:** this describes the lightness or darkness of the colour. There are a total of nine values, ranging all the way from white to black. (white, highlight, light, lowlight, middle, highdark, dark, lowdark, black)
  - **Intensity/Chroma:** This refers to the brightness or dullness of the colour. A very bright colour is said to be of full intensity.
5. **Pattern:** This refers to any sort of surface enrichment and applies to both two-dimensional and three-dimensional objects. A large room can support more patterns than a small one. Patterns used may be naturalistic, stylized, geometric or abstract. Generally, pattern should cover just about a quarter of the total surface area. If walls and carpets are plain, then draperies and upholstery may be patterned.
6. **Light:** When light strikes an object, it may be reflected, absorbed or allowed to pass through. Light has a functional as well as an aesthetic effect. Light may be dull or sharp, bright or diffused.
7. **Space:** This is among the most important elements of interior design. The organization of space is basic to architecture and interior decoration. Unless a space is thoughtfully planned, nothing else will seem quite right. Today, the trend is for spaces to become freer and less obstructed. Indoor spaces can be ‘opened up’ by means of fewer partitions and large opening between rooms. Indoor spaces can also connect with limitless outdoor spaces by means of glass walls, large openings and porches.

• **PRINCIPLES OF DESIGN**

1. **Proportion:** (scaled proportion) scale refers to the size of the object in comparison to the size seen. Proportion is co-related to the scales but in less technical form. It is not necessary that all details of the room décor be in

correct scale to the size of the room but there should be proper proportion and relationship.

2. **Scale:** Another important aspect of proportion is scale. A person who must select and arrange things to look good together must develop a sense of scale. In order to judge what sizes must be grouped together successfully, it is necessary to grasp the underlying significance of scale. Pleasing scale requires that:
  - The sizes of all the elements making up the structure have a consistent, pleasing relationship to the structure and to each other: and that
  - The size of the structure be in pleasing proportion to the different objects combined with it.
3. **Balance:** This is obtained by grouping shapes and colours in such a way that there is equal attraction on either side of the room. Balance works on the principle of seesaw. Equal weights will balance when they are at the same distance from the center of the guest room. The different of different types of balance are as follows:
  - Formal balance
    1. Symmetrical formal balance
    2. Bi-symmetrical balance
  - Informal balance/ asymmetrical balance – also referred to as ‘active or ‘occult’ balance.
  - Radial balance- this is the type of balance that grows out of a central point or axis.
4. **Emphasis:** it is a principle by which the eye is carried first to the most important thing in an arrangement. It can also be obtained by grouping of objects.
5. **Rhythm:** rhythm means an easily connected path along which the eye travels. Rhythm can be obtained by repetition of line, form or size.
6. **Harmony:** this is an art principle producing an impression of unity. Through the selection and arrangement of consistent objects and ideas. Harmony can be achieved by repetition of line, form, texture and colour. But harmony carried too far results in monotony (same design).

- **WARM AND COOL COLOURS**

One of the most important factors of colour to be considered in interior decoration is their relative warmth or coolness. Colours that contain greater proportions of yellow

and red are considered to be warm and those that contain blue are regarded as cool. Red and orange are thus the warmest of all colours. Blue is the coolest of all colours.

The colour wheel can be divided into two halves. The colours to the left represent warm colours and the colours to the right represent cool colours.

- **COLOUR WHEEL:**



The colours in the colour wheel can be classified as primary, secondary and tertiary colours.

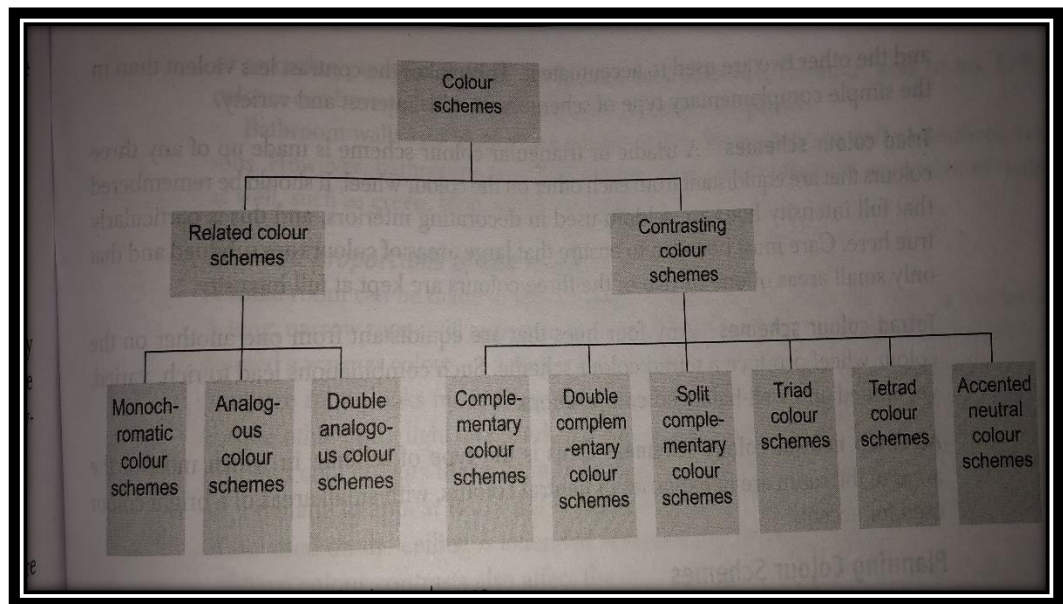
- 1. Primary colours:** are the basic pigments which form all colours. They cannot be obtained by mixing other hues. Red, yellow and blue are the fundamental or primary colours, which can be mixed so as to form all the other colours, but which cannot themselves be made by mixing any other colours.
- 2. Secondary colours:** these colours result when two primary colours are mixed in equal amounts. There are three secondary colours viz purple (red+blue), orange (yellow + red) and green (yellow + blue). The primary and secondary colours are together called the six standard colours.
- 3. Tertiary/ Intermediate colours:** when a primary colour and a neighbouring secondary colour are mixed in equal amounts, a tertiary hue results. In appearance, the intermediate is halfway between its adjacent colours. There are thus six intermediate hues: yellow- green (citrus), red-purple (plum), blue-green (turquoise), red-orange (russet), and blue-purple (mulberry), yellow-orange (peach).

- **COLOUR SCHEMES**

A colour scheme is the combination of colours used for decorating- whether doing up interiors or for designing a dress, or another purpose. There are two main types of colour schemes: related and contrasting.

- **THE CLASSIFICATION OF COLOUR SCHEMES**





- **COLOUR SCHEMES**

1. **Monochromatic colour scheme:** this is also called a one-hue or one-mode harmony. It evolves from a single hue, which can be varied from highlight to low dark and from full saturation to almost neutral.
2. **Analogues colour scheme:** these are based on hues that lie next to each other on the colour wheel. This scheme can have a minimum of two colours and a maximum of three.
3. **Double analogous:** any four adjacent hues on the colour wheel.

- **CONTRASTING COLOUR SCHEMES**

The colours chosen in these harmonies lie opposite to each other on a colour wheel and hence usually share no similarities.

1. **Complementary:** these are built on any two hues directly opposite each on the color wheel.
2. **Double complementary:** two adjacent colours and the complements(opposite) Together form a double complementary colour scheme.

3. **Split complementary:** it consists of any hue together with the two hues on either side of its complement (or opposite).one of the three is selected to be the main colour and the other two are used to accentuate it.
4. **Triad colour scheme:** it is made up of any three colours that are equidistant from each other on the colour wheel. It should be remembered that full intensity hues are seldom used in decorating interiors.
5. **Tetrad:** any four hues that are equidistant from one another on the colour wheel.
6. **Accented neutral:** this is the type of scheme in which most of the areas of the room are in neutral colours with small areas of a bright colour for accent.

- **PLANNING COLOUR SCHEMES:**

There are certain factors that must be taken into consideration when planning a colour scheme for a room:

1. **Purpose of a room:** This is the most important consideration when planning a colour scheme. The colours in the room must suit the purpose of the room and create mood or atmosphere that's needs to be conveyed. At the same time, the colours used must express the interests and personalities of those who will use the room. A guest room should have cool colours, the living room should induce a feeling of comfort, a dining room should have appetizing colours which would stimulate the appetite, the kitchen should have bright, light and cheerful colours and bathroom walls and fixtures should ideally be white for hygienic as well as aesthetic reasons.
2. **Size and proportion of the room:** A small room can be made to appear larger if light, cool colours are used on the walls. Sharp colour contrasts also affect the apparent size of the room.
3. **Relationship to other rooms:** A room should not only be in harmony with itself, but should also harmonize with other rooms in the property. There should be a feeling of harmony or unity as you pass from one room to the other.
4. **Amount of light received by an area:** If the area receives a lot of natural light, the colours used should be cool to provide relief from strong daylight and natural heating. An area that receives less daylight should be done up in warm colours.

5. **Type of surface:** A rough surface casts small shadows and so appear darker than a smooth one.

• **LAW OF CHROMATIC DISTRIBUTION**

This is a general rule to be applied to the various areas in the room. The law states that larger areas in a room must be covered with the most neutral hues in the colour scheme. As the areas reduce in size, chromatic intensity may be proportionately increased. It is usual also to make the walls lighter the floor and the ceiling lighter than the walls. For this purpose, a room can be subdivided into component areas of colour distribution as follows:

1. Dominant areas- walls, floors and ceilings.
2. Medium areas- draperies, bed covers and so on.
3. Smaller areas- sofa sets, small pieces of upholstered furniture, and so on.
4. Accents – ashtrays, paintings, and so on.

## **KEY TERMS – UNIT 1**

1. **Amenity**– A service or item offered to guests or placed in guestrooms for their convenience and comfort at no extra cost.
2. **Aromatherapy**– The use of aromatic plant extracts and essential oils for healing and cosmetic purposes.
3. **Ayurveda**- A Sanskrit term made up of the words *ayu* ('life') and *Veda* ('knowledge' or 'science'), this refers to a system of using the inherent principles of nature to maintain health in a person by keeping the individual's body, mind, and the spirit in perfect equilibrium with nature.
4. **Biodegradable**- Substances capable of being decomposed by living organisms.
5. **CPU**- Central processing unit of a computer system.
6. **Crib**- Cot for babies, provided to guests on request.
7. **Cross-training**- Training employees to work in departments other than their specialty during periods of staff shortage.
8. **Diffusers**- Small devices that are used in aromatherapy to disperse essential oils so that the fragrance disperses in the surrounding air.
9. **Duvets**- Quilts filled with down feathers or synthetic fibres. Many hotels use duvets with a decorative duvet cover to replace both blankets and bedspreads. They are sometimes referred to as 'comforters' as well.
10. **Eva floors**- An exclusive women's-only floor in hotels offering rooms and services exclusively to women clientele.
11. **Ergonomics**- The study of the efficiency of people in relation to their working environment.
12. **Exposed bathrooms**- These bathrooms usually found in resorts and spas are exposed to the sky as there is no roof.
13. **Gloss meter**- A gloss meter is an instrument used to measure the level of gloss of a surface.
14. **GPS**- Global positioning system, which uses satellites and receiving devices used to compute position on the earth.
15. **GRA**- Guestroom attendant.
16. **Hygiene**- The science that deals with the preservation of health by maintaining high standards of cleanliness.
17. **Hypoallergenic**- Refers to substances or surfaces least likely to cause allergic reactions.
18. **IT**- Information technology.

- 19.**Jacuzzi**- A bath with a system of underwater jets of water to massage the body.
- 20.**LAN**- Local area network --- a group of computers and associated devices that share a common communications line or wireless link and typically share the resources of a single processor or server within a small geographic area.
- 21.**LED**- Light emitting diode.
- 22.**Low emissive glass**- This glass is treated with an invisible metallic oxide coating, creating a surface that allows light to pass through, while reflecting the heat. This results in substantial energy conservation in buildings where it is used.
- 23.**Lux meter**- A lux meter is a device used to measure the illumination on a surface.
- 24.**Outsourcing**- A conscious business decision to move internal work to an external provider.
- 25.**Ozone**- A form of oxygen where each molecule is composed of three atoms of oxygen instead of the more usual. It decomposes quickly and easily, turning into regular oxygen when the extra oxygen atom splits away from the ozone molecule.
- 26.**Patisserie**- Refers to an outlet where pastries and cakes are sold.
- 27.**Pedicure machines**- Machines used for cosmetic treatment of feet and toenails.
- 28.**Performance standards**- A required level of performance to meet the quality standards set by the organization.
- 29.**PDA**- Personal digital assistant--- a handheld computer that serves as an organizer for personal information; it may be also combined with a cell phone and other wireless technologies, providing a mobile office for people on the go.
- 30.**Pillow menu**- A list of available pillows provided by a hotel guests, usually free of charge. It allows guests to make an alternative pillow choice. Some common pillow alternatives are memory foam, buckwheat hull, and hypoallergenic. Some hotels offer pillows to treat specific conditions such as headaches or stress.
- 31.**Productivity standards**- An acceptable amount of work to be done within a specific time frame according to an established level of performance.
- 32.**Reflect meters**- A device to measure the level of reflectance of a reflective surface.
- 33.**Sanitizer**- An agent used for reducing microbial counts to an acceptable level.
- 34.**Slumber/sleep kit**- A slumber/sleep kit may contain eye mask, ear plugs, aroma roll-ons, and blackout eye bands for jet lag; it is placed in the drawer of the nightstand.

- 35.**SOPs**- Documents of a standing nature that specify a certain method of operating or specific procedures for the accomplishment of a task. SOPs can be developed for all important housekeeping activities and tasks.
- 36.**Towel art**- The art of folding towels to resemble natural things such as flowers, animals, etc. In hotels it is usually done by a housekeeper and placed on beds in guestrooms.
- 37.**Vertical gardens**- Also called green walls, these are gardens that scale the walls vertically and help conserve space and water. The set up involves plants grown in a medium like soil and features an integrated water delivery system.
- 38.**VoIP**- Voice over Internet protocol--- a category of hardware-and-software systems that enables people to use the Internet as the transmission medium for telephone calls by sending voice data over the Internet. VoIP is also referred to as ‘Internet telephony’, ‘IP telephony’, or ‘voice over the Internet (VoI)’.
- 39.**Wi-Fi**- Wireless fidelity--- an amenity provided nowadays by most world-class hotels, this technology enables guests to access a wide range of information, applications, and computing resources without having to worry about connectivity issues.
- 40.**Whirlpool**- A heated pool in which hot aerated water is continuously circulated.
- 41.**WLAN**- Wireless local area network--- a type of local area network that uses high-frequency radio waves rather than wires to communicate between nodes. It is also referred to as ‘LAWN’ or ‘local area wireless network’.
- 42.**Work study**- An analysis of the tasks, the equipment, and the time taken to do a specific job. This is an important tool for determining standard operating procedures.
43. **Yoga kit**- Contains a yoga mat, oil diffusers and aroma oils, CDs on basic yogasanas, yoga hand book, and yoga apparel. It is placed as a guestroom amenity.

## **KEY TERMS- UNIT 2**

- 44.**Acoustics:** The sound absorption quality of certain material, usually in ceilings, walls & floors.
- 45.**Burlap:** jute canvas
- 46.**Chroma:** Also known as intensity, this refer to the brightness or dullness of a colour.
- 47.**Cornices:** these are 4-7 inches deep, box like shapes used at the top, horizontal portion of the drapery treatment on a window to hide the poles & other hardware.
- 48.**Dado:** A stronger, more easily cleaned material used to surface the lower part of a wall, approximately upto 150 cm height from the floor. A dado is essential to prevent damage caused by banging of trolleys, luggage, & rubbing & scratching that may be caused by people in hotels.
- 49.**GLS lamps:** General lighting service lamps.
- 50.**Grout:** A term used to describe the areas or binding material between raised or filling elements of flooring or wall treatments ( such as tiles)
- 51.**Gypsum:** Used to make plaster of paris, this is chemically hydrated calcium sulphate.
- 52.**Hue:** The specific term used to indicate the name of an extra colour, such as crimson red, turkish blue, sea green & so on.
- 53.**Parquet:** A type of high- quality hardwood flooring in which decorative hardwoods are cut into blocks & formed into panels, permitting elaborate geometric design such as herringbone, basket weaves & strip patterns.
- 54.**Pile height:** The measurement (usually in fractions of an inch) of the pile of a carpet from the base of the primary backing to the tip of the yarn.
- 55.**PVC:** Polyvinyl Chloride
- 56.**Resilience:** the term refers to the ability of a surface to recover its original appearance & thickness after being subjected to compressive forces or crushing under traffic.
57. **Shoji Screens:** Japanese screens originally made of rice paper mounted on a wooden frame coated with black lacquer, but now available in translucent plastic materials.
- 58.**Shading:** The twisting of carpet pile caused by feet or the moving of furniture across it, which shows up as dark patches.
- 59.**Stucco:** Plaster or cement used for coating wall surfaces or molding into architectural decorations.
- 60.**Tint:** A value that is lighter than the normal colour of a pigment is called a tint.

61. **Tertiary Colours:** (also intermediate colours) these are formed by mixing a primary colour with its neighboring secondary colour in equal amounts. There are 6 intermediate pigment hues- yellow-green, red- purple, blue- green, red-orange, blue-purple, & yellow-orange.
62. **Value:** This term describes the lightness or darkness of a colour. There are a total nine values for each pigment, ranging from white to black.

### **KEY TERMS- UNIT 3**

63. **Atrium:** A central lobby into which all rooms open or which rooms may overlook.
64. **Emphasis:** The design principle that directs us to create points of interests so that the eye is carried first to the most important thing in any arrangement and from that point to every other detail in order of its importance.
65. **Harmony:** The design principle that produces an expression of unity through the selection and arrangement of constant objects and ideas.
66. **Proportion:** The principle of proportion states that the relations between parts of the same thing or between different things of the same group should be satisfying. It deals with relationships in size, shape, colour, light, texture and pattern.
67. **Interior design:** It is defined as an orderly arrangement of lines, forms, colours, textures and so on in design so as to create beauty in interiors.
68. **Structural design:** The size, form, colour and texture of an object.
69. **Texture:** The tactile quality of a surface-how something feels when we touch it-or the suggestion of tactile qualities when light strikes it.
70. **Hand caddy:** A portable container for storing and transporting cleaning supplies, carried on a room maid's cart.

UNIT NO	INCHARGE COLLEGE	FACULTY INCHARGE
1	Raheja college	Madhuri Maam
2	Bharti Vidyapeeth- Navi Mumbai	Maxim sir
3	Sophia /St.andrews college	Linish sir/ Nisha Mam / Savita Mam

**THE END**



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