

**BHARATH COLLEGE OF SCIENCE AND
MANAGEMENT, THANJAVUR – 05.**

DEPARTMENT OF HOTEL MANAGEMENT

**ADVANCED ACCOMODATION OPERATIONS
MANAGEMENT
16SCCHM8**

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Unit : 3

Interior Design.

INTRODUCTION

Interior design is important due to the aesthetic value it passes in a given space.

IMPORTANT OF INTERIOR DESIGN

Interior design provides a soul to a building or space and makes a space more functional Pleasant and livable. Interior design plays role in the everyday life. Interior design is an important technique that is given a high attention all over the world now a day.

ROLE OF INTERIOR DESIGN:

Interior spaces functional, safe and beautiful by determining space requirements and selective decorative items such as color lighting & materials.

OBJECTIVES OF INTERIOR DESIGNING

The objective of interior design and decoration is to achieve (1) beauty, (2) expressiveness and (3) functionalism.

BEAUTY

Whenever one says that something is 'aesthetic', one usually implies that a beautiful piece has been created. Involved in this accomplishment is the organization, selecting and arrangement of materials into an appealing form. Beauty is not only objective in planning and furnishing accommodation the areas.

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.

FUNCTIONALISM

An accommodation product should, most importantly, 'work'. Its spaces and furniture should serve the purpose for which they are intended. All areas should give the maximum of service, comfort, and pleasure for the minimum of care. Every phase of planning and furnishing should be based on function. Other considerations that must be kept in mind while designing are as follows:

1. There should be optimum utilization of space available.
2. It should be easily maintainable, that is, it should withstand the abuse it receives during operations.
3. It should be convenient to the guests.
4. It should be practical in cost and within the budget constraints as far as possible.

BASIC TYPES OF DESIGN

There are two types of design. 1. structural design, 2. decorative design,

STRUCTURAL DESIGN

It denotes the structure or construction of objects. This is comprised of the size, form, colour, and texture of an object, be it the object itself, or the drawing of the object worked out on paper.

Basic Requirements of a good structural design.

- It should be simple.
- It should be well proportioned.

- In addition to being beautiful, it should be suited to its purpose.
- It should be suited to the material from which it is made.

DECORATIVE DESIGN

This is the surface enrichment of structural design. Any line, colour, or materials that have been applied to structural design for the purpose of adding a richer quality to it constitute its decorative design.

Basic Requirements of a good Decorative design.

- Decoration should be used in moderation.
- Decoration should be placed at structural points and it should strengthen the shape of the object.
- There should be enough background space to give it an effect of simplicity.
- The background should be suited to the patterns that are to be placed against it.

FACTORS AFFECTING INTERIOR DESIGN

1. Fussy clients increased competition
2. Online reviews
3. Getting educated
4. Confusion on what Interior design
5. Allergies and stress
6. Lack of maturity
7. Design is becoming more superficial
8. Design has become a group consensus problem

FUSSY CLIENTS

Fussy clients have always been an issue. Many consumers are knowledgeable about the industry do not only know they want but also very demanding.

INCREASED COMPETITION

Interior design Popularity has grown leading to more competition. This has resulted in a station for new starters & drop of prices for service offered by experienced designer.

ONLINE SERVICE

Most Interior design London are shying away from engaging with potential customers online for fear of bad mouthing thus demanding their reputation.

GETTING EDUCATED

There are many schools offering interior design making it difficult to choose. Interior design are finding it difficult to up their skill at the same time running a business.

ALLERGIES & STRESSES

Most Interior design spend them indoors with exposure to the chemical in finishes thus exposing them to allergies asthma, Sick building syndrome.

LACK OF MATURITY

Design lacks maturity there handling learning flow through the generations. Design is continuously being reinvented with an in expertise group of young professionals.

DESIGN IS BECOMING MORE SUPERFICIAL

Interior design has expanded is now more conceptual Increased dependence on computers means most designers have little grasp on real craftsmanship.

BASIC ELEMENTS OF ART

Elements of Interior 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. Three additional elements – pattern, light and space help to complete the interior design.

LINE

Line give birth to forms and shapes are responsible for establishing a sense of harmony, entrust and unity in a living space lines are broadly classified horizontal, vertical, dynamic. This is a very important element in planning and furnishing. It is the most basic design element. The artist combines horizontal, vertical, diagonal and curved lines until the effect is pleasing to the eye.

Vertical Lines: When standing, a human being is perceived as attentive and ready to act. These lines are effect sever. In hotels lines of doorways, pillars, columns, draperies, and furniture give the necessary strength and height to rooms.

Horizontal Lines: When a human being lies down, he or she is perceived as resting or sleeping. the horizontal lines naturally suggests rest. repose, or steadiness. In hotels, the horizontal lines of tables, sofas and other furniture complement the severely vertical lines in other parts of an area.

Diagonal Lines: When running or moving things, the human body is often in a diagonal position and therefore diagonal lines suggest movement and activity. In hotel diagonal lines appear in staircases and sometime in curtains, draperies and wallpaper.

Curved Lines: In relaxation they body takes the curved position. Curved lines indicate flexibility and grace. In hotels curved lines may form a transition between the abrupt joining of vertical horizontal lines.

Dynamic:

Dynamic lines are can seen on structure like stairs ID must know how to utilize there lines to define the forms.

Forms:

The term 'form' is applied to three – dimensional areas and objects, whereas 'shape' may refer to a two – dimensional one. Without the beauty of form, good texture, colour or decoration can be of no use. The form of an object should thus suit its function.

Texture:

The word texture refers to the tactile quality of the surface of any object or area. Two basic categories of texture are tactile and visual. Tactile or actual texture can be felt by hand – be it rough like unglazed brick or smooth like velvet. Visual or 'illusionary' texture may be absolutely smooth to touch. Texture plays a very important part in interiors because it affects the quality and quantity of light reflected by the surface. Textures are listed are like blistered, bubbly, corrugated, crepe, crinkly, coarse, crystalline, delicate, dull, feathery, filmy, fine, firm, flexible, foamy, frilly, glassy, glossy, granular, grooved, hairy, lacy, metallic, polished, rocky, sandy, smooth, thorny, uneven, wavy, woody, etc.,

Colour:

The appeal or colour is universal. Colour is the impression received by the brain from certain stimulations of the retina in the eye. Its perception occurs because objects reflect or transmit light that enters the eye. Daylight, although it appears as 'white' light, is actually composed of violet, indigo, blue, green, yellow, orange, and red colours of light.

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. 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.

Space:

This is among the most important elements of interior design. The organization of space is basic to architecture and interior decoration. Almost any space, if sensitively handled, can be made effective, live able and even dramatic. A sense of the beauty of a space makes us want large undecorated walls, and floors can be bound together by other elements without disturbing the effect. Indoor spaces can be 'opened up' by means of fewer partitions and large openings between rooms. Indoor spaces can also connect with the limitless. Outdoor spaces by means of glass walls, large openings and porches.

PRINCIPLES OF DESIGN

The principles of design help once in determining the quality of a design to assess whether it is artistically good or poor in appearance. While using the basic elements of design or art, we should keep these principles in mind. The principles of design are proportion; balance; emphases; rhytem; and harmony.

Proportion:

The principle of proportion is also called the law or relationships. The principle of proportion underlines all other principles of design. 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.

Balance:

Balance is known as equilibrium, balance is a condition of rest or repose. Through balance, we get a sense of equipoise. This restful effect is obtained by grouping shapes and colours around a center or pivotal point in such a way that there are equal attractions on each side or the centre. Balance can be understood well if one understands the principle of the see-saw, as both work on the same principle. Balance are divided into formal balance, Informal / asymmetrical balance and Radial balance. Formal balance are divided into symmetrical formal balance and bi-symmetrical formal balance.

Emphasis:

This is the design principle that directs us to create a point of interest such 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 importance.

Rhythm:

This is a major design principle, through which an underlying unity and variety can be achieved. Rhythm is movement. All movement in design is not, however, rhythmic. Sometimes movement is distracting.

Harmony:

This is the fundamental requirement of any piece of work in which appearance as well as use have to be considered. Harmony is the most important of all the principles of design. Harmony has five aspects like, shape, size, texture, ideas, colours.

COLOUR AND COLOUR SCHEMS

Colours may be approached from any of the five angles that of physiologists, chemists, physicists, psychologists, or people who work with pigments. This are generally known as the Prang system and the Munsell system.

Dimensions of colour

There are three properties or qualities that may be called the dimensions of colour these are just as distinct as the length, breadth and thickness of an object. The words 'color' and 'hue' are used interchangeably, 'colour' is a generally term and 'hue' is a specific term referring to definite identifiable colours.

Value: This describes the lightness or darkness of a colour, There are a total of nine values, ranging all the way from white to black. White is the highest value and no hue can be as light as white. Black is the lowest value and no hue can be darker than black.

Intensity / Chroma: This refers to the brightness or dullness of a colour. A very bright colour is said to be of full intensity.

Warm and cool colours

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

Advancing and Receding colours

Warm hues seem to advance and cool ones to recede, or go back or further away from you. a cool, light colour on the walls thus helps to make a small room look larger. a warm colour visually draw the walls in lowers a high ceiling or makes a room that is too large look more compact.

Prang's Colour System

Prang's Colour system uses 12 colours represented on a colour wheel. Colour Wheel can be classified as primary, secondary and tertiary colours.

Primary colours: These 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 colour.

Secondary / Binary Colours: Secondary colours result when two primary colours are mixed in equal amounts. There are three secondary colours.

Purple – Red + Blue

Orange – Yellow + Red

Green – Yellow + Blue

The primary and secondary colours are together called the six standard colours.

Tertiary / Intermediate Colours: When a primary colour and a neighboring secondary are mixed in equal amounts an intermediate hue results.

Colours are having Schemes. It is divided into related colour schemes and contrasting colour schemes. Related colour schemes are divided into Monochromatic colour schemes, Analogous colour schemes and Double analogous colour schemes. Contrasting colour schemes are divided into complementary colour schemes, Double complementary colour schemes, split complementary colour schemes, Triad colour schemes, Tetrad colour schemes and accented neutral colour schemes.

Light:

Light is one of the most obvious elements of Interior Design. Light sets in the mood and ambience into a living space and highlights the every other elements including space, line and forms. 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.

Unit – IV

Lighting & Lighting system

Light has a functional as well as a decorative role in any establishment and especially so in hotels. Light is essential for vision. Different types of tasks demand different amounts of light.

Light is a form of energy without which there can be no vision. When light strikes an object, it may be reflected, absorbed, or allowed to pass through.

What is light?

Light is a form of electromagnetic energy that travels through space as a wave. Like microwaves and x-rays those waves have a wavelength and a frequency. The difference is that humans possess receptors able to sense energy with wavelengths between 400 and 700nm and turn it into images.

Light intensity measured

The fundamental light intensity unit is the candela nominally the light given off by one candle or more precisely, A light source, like the filament of an incandescent bulb emits light in all directions. Effectively, it sits at the center of a sphere of radiated light.

Importance of lighting:

Light has definite emotional effects and can be very stimulating. Light is exciting while darkness is depressing proper lighting illuminates what we want to see. Light that is too bright exhausts physically and can be tiring. Lighting thus plays both a functional and an aesthetic role in a hotel.

Types of Lighting and lights

Light can be classified in many ways. The classification of light based on its source.

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 strain and helps to prevent accidents. It makes a vital contribution to the attractiveness of homes and hotels. Artificial lights are classified into incandescent and fluorescent light.

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 and bulbs cost less than the fixtures and tubes used in the fluorescent or discharge types.

Halogen lamps are another source of incandescent light. These are filled with a halogen-mixed gas filling. This prevents the tungsten particles given off by the incandescent filament from condensing on the wall of the bulb. Halogen lamps are mainly used for floor lighting and as a light source in projectors and motor-vehicle headlamps.

Fluorescent/ discharge: Fluorescent tubes are a luminescent or 'cold' (not produced by heat) source of light. A glass tube with an inside coating of fluorescent powder is filled 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 colour. They also consume less energy than incandescent bulbs.

Low-pressure lamps: These are the most widely used tubular fluorescent lamps. They are primarily low-pressure mercury tubes. Low-pressure sodium vapor lamps are the

most efficient light sources and are used in yard and street lighting. The light produced by these is yellow in colour.

High-pressure lamps: These include high-pressure mercury vapour (HPMV) and high-pressure sodium vapour (HPSV) lamps. HPMV lamps produce a bluish white light, whereas HPSVs produce a golden yellow light.

Light emitting diode (LED): It is the latest trend in the way light is produced. A diode is a type of semi-conductor. In an LED one half of the lighting element is a semi-conductively material with added impurities that contain an abundance of electrons that are negatively charged. This side is called the 'n-type' semi conductor.

The characteristics of filament, fluorescent, and LED lamps are outlined is various based on the way light is directed on the object area to be illuminated, artificial light may further be classified into direct, indirect, diffused, and semi – indirect lighting.

Function-based classification

Light may also be classified on the basis of its function.

General or area lighting: This illuminates the room more or less uniformly. It brings the design and colours 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 provide 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 of lighting may be either by way of task lighting or accent lighting. Task lighting is for reading or other close work, sewing, needlework, and other crafts of various kinds; and cooking, especially in areas where electrical appliances or knives are employed. Accent

lighting is for highlighting a painting or other art object; focusing on an architectural element; illuminating a bank of plants not placed near a window.

Safety lighting: As the name suggests, this type of bright lighting is used for safety reasons in area such as stairways, along corridors, around swimming pools, and by 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 room. It may be achieved in the following ways: Valance lighting, Cornice lighting, cove lighting, track lighting, soffit lighting.

Non-architectural lighting

These types include various fixtures and lamps like ceiling fixtures, wall fixtures and portable lamps.

Lighting Fixtures

When buying lighting fixtures to implement a lighting scheme, their appearance as well as the light they produce should be satisfactory. Shades, globes, and even lamp bases can look quite different when illuminated. They should look good in both their daytime and night-time roles.

Special Decorations - Occasions for special decorations

Lighting Plans

A variety of lighting is necessary in most rooms and public areas. Provide first for efficiency and safety.

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. In a large area, a chandelier, cove lighting, wall brackets or pelmet-type/under-valance fittings can be used to provide general illumination. 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 up lighters can be used to dramatize foliage and around water features.

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 further apart than 1 1/2 times their distance from the floor.

Guest Rooms

Guest Rooms 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.

Planning a lighting system

Designing a lighting system is important for achieving efficiency and aesthetics in lighting. Lighting requirements, Design, Durability, Ease of replacement, Ease of maintenance, Energy efficiency, Heat gains, Natural light, Indirect effects of elements of designs, Directional controls and reflectors, Cost-effectiveness these are the following factors are involved in planning good lighting systems.

Measurement of light or Illumination

A 'lumen' is a measurement of light output from a light source. All lamps are rated in lumens. A measurement of a 100 – watt incandescent lamp is about 1750 lumens, The distribution of light on a horizontal surface is called its illumination . Illumination is measured in foot-candles. a Foot-candle is defined as a lumen of light distributed over one square foot area.

Foot-candle: A lumen of light distributed over 1 sq foot of area. It is a unit of illumination. 1 foot-candle = 10.76 lux. (Lux is the measure of illumination level or on the surface that is being illuminated)

Illumination: The distribution of light on a horizontal surface is called its illumination. Illumination is measured in foot-candles.

Lighting efficacy: The ratio of light output from a lamp to the electric power it consumes. It is measured in lumens per watt (LPW).

Lumen: a measurement of the light output from a light source. All lamps are rated in lumens. The output of a 100-watt incandescent lamp is about 1750 lumens.

Unit : 5

Environmental Practices in Housekeeping

INTRODUCTION

Ecotels also called 'green hotels', are earth-friendly or eco-sensitive hotels that feature innovative and imaginative programmes for conserving natural resources, reducing waste, minimizing pollution and maximizing sustainability.

Ecotels follow the three 'Rs' of environmental conservation-reducing, reusing and recycling. Ecotel certification requires these properties to strictly adhere to certain criteria, which may be called the 'five globes' that are the cornerstones of environmental responsibility. These five criteria are Energy efficiency, Water conservation, Solid waste Management, Environmental Commitment, Employee education and community development.

Energy efficiency: This requires the existence of a formalized framework to reduce the energy consumption of the hotel. For instance, the hotel should have been designed and constructed keeping in mind maximum energy conservation.

Water conservation: The effective conservation of water in all departments of the hotel across all levels, must be evaluated. The extent to which water is recycled and re-utilized is also considered an important factor. All employees are expected to be well versed in the water-conservation operations of the hotel.

Solid waste Management : The hotel must effectively recycle and manage waste, wherever generated. Proper systems for the collection, recycling, and disposal of these wastes in all its departments are a must for ecotel certification

Environmental Commitment:

The hotel must demonstrate the existence of a formalized commitment towards the preservation and enhancement of the natural environment. It must, through all its operations, activities, and written statements, communicate its commitment to the environment.

Employee education and community development

How involved the employees are in the efforts of the hotel to contribute towards the environment is crucial to the fulfillment of its mission. The hotel should have training modules in place for employees at all levels to familiarize them with the eco-friendly initiatives of the hotel.

Ecotel certification is based on five separate inspections, each with a three-tiered numerical scoring system carried out by HVS International (Hospitality valuation Services International).

Primary Criteria

A hotel applying for certification must satisfy all of the primary criteria before an inspection is scheduled by HVS International.

Secondary Criteria

After it is evident that the primary criteria have been satisfied inspections are scheduled to ascertain the hotel's score according to the secondary criteria. Each department or function area of the hotel is inspected and scored individually.

Tertiary Criteria

The tertiary criteria are described as a bonus system. The Hotel received bonus points for environmental programmes discovered in operation that are not part of the

primary criteria and are considered to be above ordinary levels of environmental responsibility

Hotel that achieve the globes qualify as Ecotel certified hotels for a period of two years and must agree to re-inspections at any time during that period.

Eco-Friendly Site

The building site chosen for a property can greatly affect the comfort and energy efficiency of the hotel built upon it. The prospective building site should be examined for existing tree groupings land forms and structures that will aid in creating pleasant, usable outdoor spaces. Examinations of the particular site's unique characteristics is important. The top of a hill may be too windy, dry, and exposed to the hot sun. A plot that allows for the siting of the hotel on a relatively flat area and in a natural clearing will minimize the disruption to the natural vegetation. Every attempt must be made to protect and retain existing landscaping and natural features.

Recycle and Reuse

Using products with a significant proportion of recycled content also helps develop markets for recycled materials. 'Trash is Cash' and fly ash, for instance, is a good example of it. fly ash is the waste product of the thermal power industry. Fly ash-based cement and AAC blocks for construction are ideal options for a 'green' building. Similarly, by using certified wood, the unnecessary felling of trees is avoided. All new wood used should come from trees that are pre-selected and felled without damage to adjoining trees; wood from old furniture should be simultaneously reused.

Recycled content

Products with identifiable recycled content, including post-industrial content. In the building itself, adequate storage and collection of recyclables should be provided for.

Separate storage bins need to be provided at each floor / level for different recyclable materials such as paper, cardboard, glass, plastic and metals.

Eco-Friendly literally means earth-friendly or not harmful to the environment. This term most commonly refers to products that contribute to green living or practices that help conserve resources like water and energy. Eco-friendly habits such as recycling going organic, driving hybrids, biking, and conserving water are becoming mainstream. Nearly all of our habits, daily chores, and lifestyle choice impact the environment for better or worse. Eco-friendly products also prevent contributions to air, water and land pollution.

The basic definition of an eco-friendly hotel is an environmentally responsible lodging that follows the practices of green living. These hotels have to be certified green by an independent third-party or by the state they are located in one beneficial certification specifically for hotels is the LEED certification.

Eco Friendly Cleaning supplies

Eco-Friendly Cleaning Products For The Home in India

- Eco swachh 3R – Natural Surface Cleaner
- Swachha – Herbal Toilet and Bathroom cleaner
- Strategi herbal all purpose kitchen cleaner
- Kolan Organic Eco-Friendly bathroom cleaner
- Zerodor Care Organic drain Line cleaner for Kitchens
- Furniture Polish
- Toilet Bowl Cleaner
- Dish Soap
- Dishwasher Detergent
- Scouring Powder

- Surface Wipes
- Multi-Surface Cleaner
- Bon Ami Powder cleanser

Waste reductions programme

Waste reduction also known as source reduction is the practice of using less material and energy to minimize waste generation and preserve natural resources. Greater efficiency in the production and use of products means less energy consumption resulting in less pollution more natural resources are preserved.

One of the bigger reasons to reduce waste is to conserve space in our landfills and reduce the need to build more landfills which take up valuable space and are a source of air and water pollution. By reducing our waste, we are also conserving our resources.

Recycling of materials

Recyclable materials include many kinds of glass, paper, cad board, metal, plastic, tires, textiles, batteries, and electronics. The composting or other reuse of biodegradable waste-such as food or garden waste-is also a form of recycling.

Most recyclable material

Steel is North America's most recycled material. More steel is recycled each year than aluminum, paper, glass and plastic combined.

Recycle waste materials

- Buy recycled paper and print on both sides.
- Make recycling bins readily available
- Recycle your empty ink and toner cartridges
- Recycle old newspapers laying around the office
- Look for the recycled option in all the products you buy

- Buy rechargeable batteries.

There are three types of recycling known as primary, secondary and tertiary. Primary recycling means that the recyclable material / product is recovered and reused without being changed in any way and usually for the very same purpose.

Items that cannot be recycled

- Plastic bags or recyclables inside plastic bags.
- Takeaway coffee cups.
- Disposable nappies.
- Garden waste.
- Polystyrene (foam)
- Bubble wrap
- Syringes or medical waste
- Dead animals

Energy conservation

Today we utilize external energy supplies to fulfill many of our basic needs as well as provide comforts, luxuries, and entertainment. The various forms of energy so harnessed include mechanical energy, heat (Solar or geo-thermal) electricity, light (in the form of solar rays) and Chemical fuels (Such as oils, gases and wood). Due to indiscriminate use, insufficient energy sources have become a global problem, though the impact of the crisis differs from country to country. The hotel industry consumes energy in different forms-electricity, heat, petrol, and so on.

Water Conservation

Water is the most basic component of all life on earth. The 'enrichment' of water with chemicals and waste has become a universal problem, however. Since freshwater

shortage is a reality, effective water management procedures are essential for the success of any establishment. some general guidelines for water conservation.

Excess water storage should be avoided, especially hot water, which loses heat easily in annulated pipes and tanks. Instead, use re-circulating systems for centralized distribution of hot water. Install point-of-use water-heating systems only for more distant locations.

Waste management

Use recycled waste water for horticultural purposes, flushing toilets, and air-conditioning through separate pipe system. A sewage treatment plant should be installed for recycling waste water generated by the hotel. Replenish ground water by rainwater harvesting. The total daily water requirement of a hotel is approximately 250 kilolitres a day. This comes to about 90 million liters a year. This includes both fresh water use (around 80%) and 'grey-water' reuse (around 20%) for horticulture. By using rainwater harvesting, nearly 25 percent of the water used within the premises is saved and an unaccounted for amount of storm water from surrounding areas is directed through proper channels into rainwater-harvesting well to recharge the ground water.

Garbage reuse and recycling

Segregation of wet and dry garbage should be adopted for recycling, reusing and recovering waste. Provide recycle baskets for newspaper, white paper, glass, aluminum, cardboard and plastic in guestrooms- make recycling as easy as possible.

Environment – Friendly Housekeeping

The housekeeping department can contribute in a big way to making a hotel eco-sensitive.

- Employees should switch off lights and fans that are not in use.

- Employees should immediately report any leaky faucets or pipes.
- Employees should ensure that only the correct wattage of bulbs is used and that light shades are clean.
- Employees should ensure that drapes are closed to maximize the effect of air-conditioning or heating.
- The Usage of cold-water detergents reduces the need for hot water.

Eco-Friendly guest supplies and stationery

The use of eco-friendly stationery goes a long way in promoting environmental-friendly practices.

- Whenever possible, buy guest amenities in bulk. Use refillable dispensers for hair and skincare products.
- Buy guest products that contain recycled materials.
- All guest supplies-soaps, shampoos, and foaming bath liquids-should be biodegradable.
- Donate leftover guest amenities, mattresses, old furniture, and so on to charities.