

Topic: Home management

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One Room Apartment

The acute housing shortage and low-income levels in India have compelled many to live in one room apartment. One room apartment is a single room where daily activities of family are carried on. Hence enough thought should be given for the proper planning and use of one room apartment. One should learn to make the best use of their single room.

1. The single room is divided into various areas as cooking, dining, sleeping, studying, entertaining areas and so on.
2. The division of space is possible by means of room divider, screen, wooden screen, plywood, wooden cupboard and other types of partitions.
3. The front area can be used as living room and the area behind can be used as cooking cum dining room.
4. The living room can be partitioned from the dining by a large wooden partition with shelves on either side. Curioes, flower arrangements could be placed on the shelf facing the living room, where as crockery, tumblers and other dining utensils could be stored on the shelves of the dining room side.
5. The kitchen section should be large enough to play the part of a kitchen as well as an eating-place.
6. The living room can be converted into bedroom at night. The dining room can serve as a study room.
7. In the kitchen, built-in-cupboards for storage help to save space. 8. Furniture should be kept to a minimum.
9. Multipurpose furniture save space. For example, sofa-combed, which is convertible as sofa in the morning and as bed at night.
10. Folding chairs, tables, movable modas are helpful to keep the place compact. 11. If wooden partitions take too much space, cloth screens can be used as room divider. By carefully planning the one room apartment a family can enjoy a comfortable life.

House plans House plans are important and it is the initial stage towards construction of a house.

Importance of House Plan

1. For an owner or builder to have clear idea about the construction.
2. To estimate the cost of the proposed building.

3. To estimate the building materials requirement.
4. To get sanction for construction from the authorities. The plans usually required in connection with the building are site plan, elevation, perspective view, cross-sectional plan, land scape plan and floor plan.

Site Plan: This consists of a drawing, which shows the location of the particular building in a plot with reference to the surroundings.

This includes,

1. The length of the boundary of the plots.
2. The adjoining plots on all sides with numbers.
3. The nearest street.
4. The north direction indicated by an arrow with the letter 'N' at its head.
5. The exact location of the proposed building and other structures and margin around the house.
6. The drainage lines
7. The public water lines.
8. 8. The direction of the prevailing wind.
9. The direction and amount of the downward surface slope.
10. Results of the type of soil in the plot.

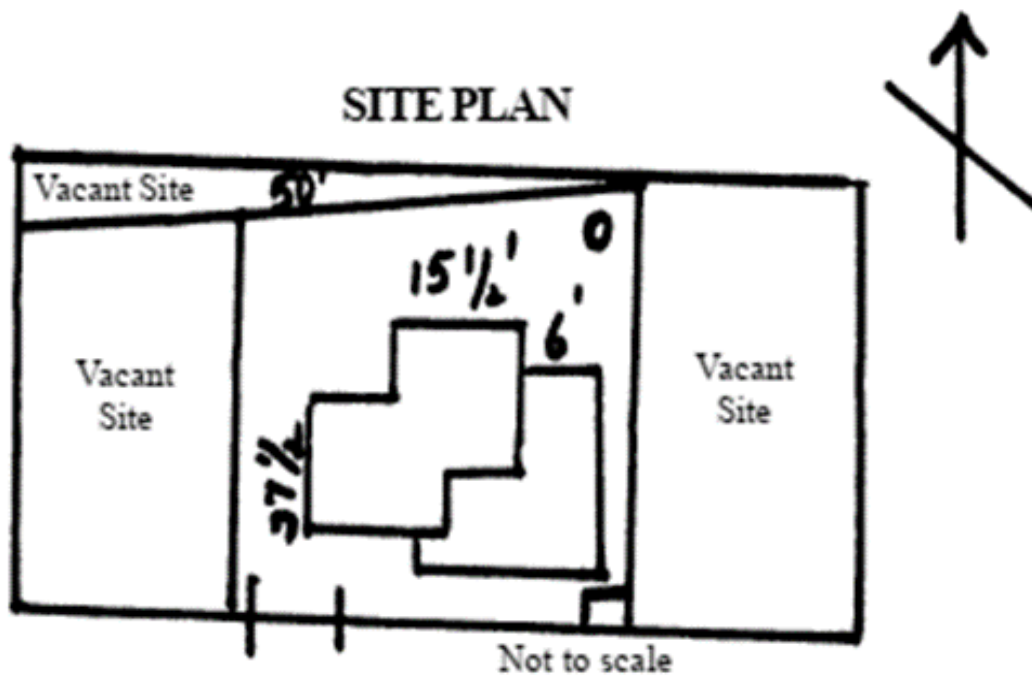


Fig. 3 - Site Plan

Elevation: This shows the type and location of the windows, doors, balconies, and roof lines which will enhance the outside appearance of the house.

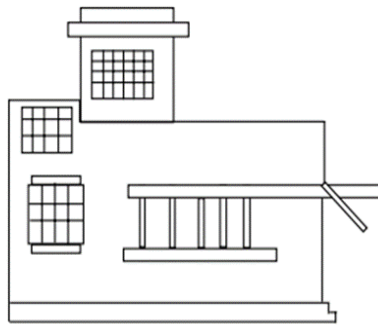


Fig. 4 - Front view elevation

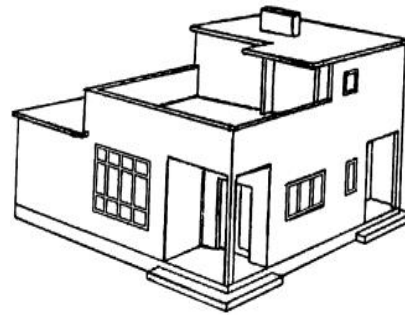


Fig. 5 - Perspective View

Perspective view: This represents the photographic view with three-dimensional effect resembling the true image of the proposed house.

Cross sectional plan: This explains fully the details from the roof to the foundation, in a vertical position. This indicates the heights of the windows, doors, built in cupboards, ceiling, thickness of the floor, walls and depth of foundation.

Land scape plan: This shows the positions of plants, shrubs, lawns, paths, etc. in the plot through which the beauty of the building can be enhanced.

Floor plan: This is a horizontal plan which shows the general arrangements of the various rooms, its length and breadth, thickness of walls, positions of the doors, windows, cupboards, furniture and fittings.

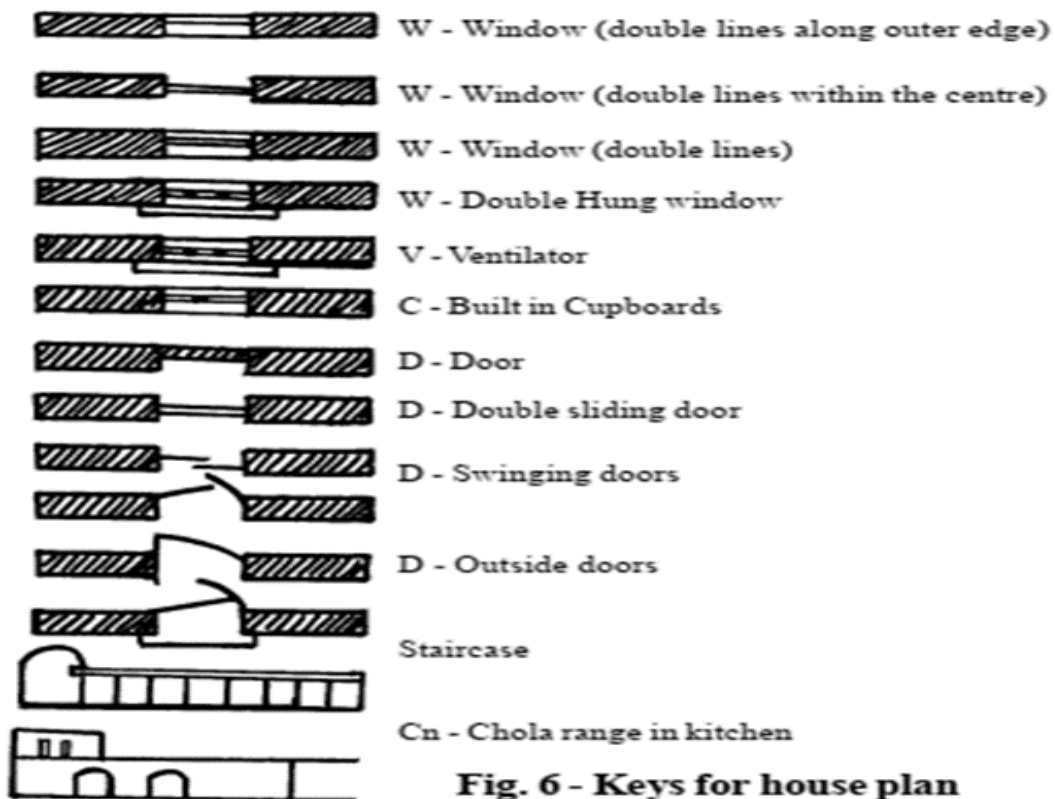


Fig. 6 - Keys for house plan

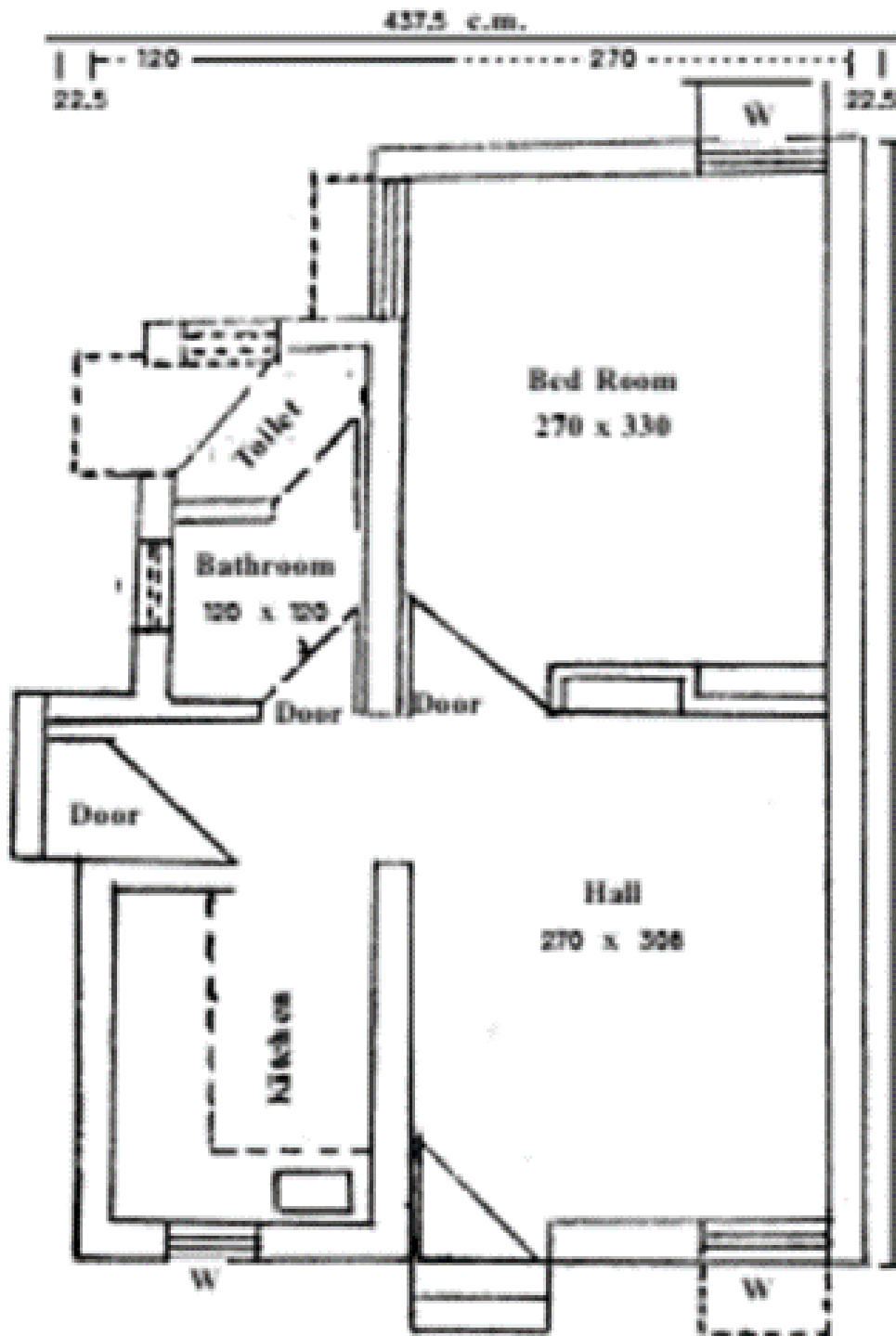


Fig. 7- Low income group house plan Plinch area 386 sq.ft

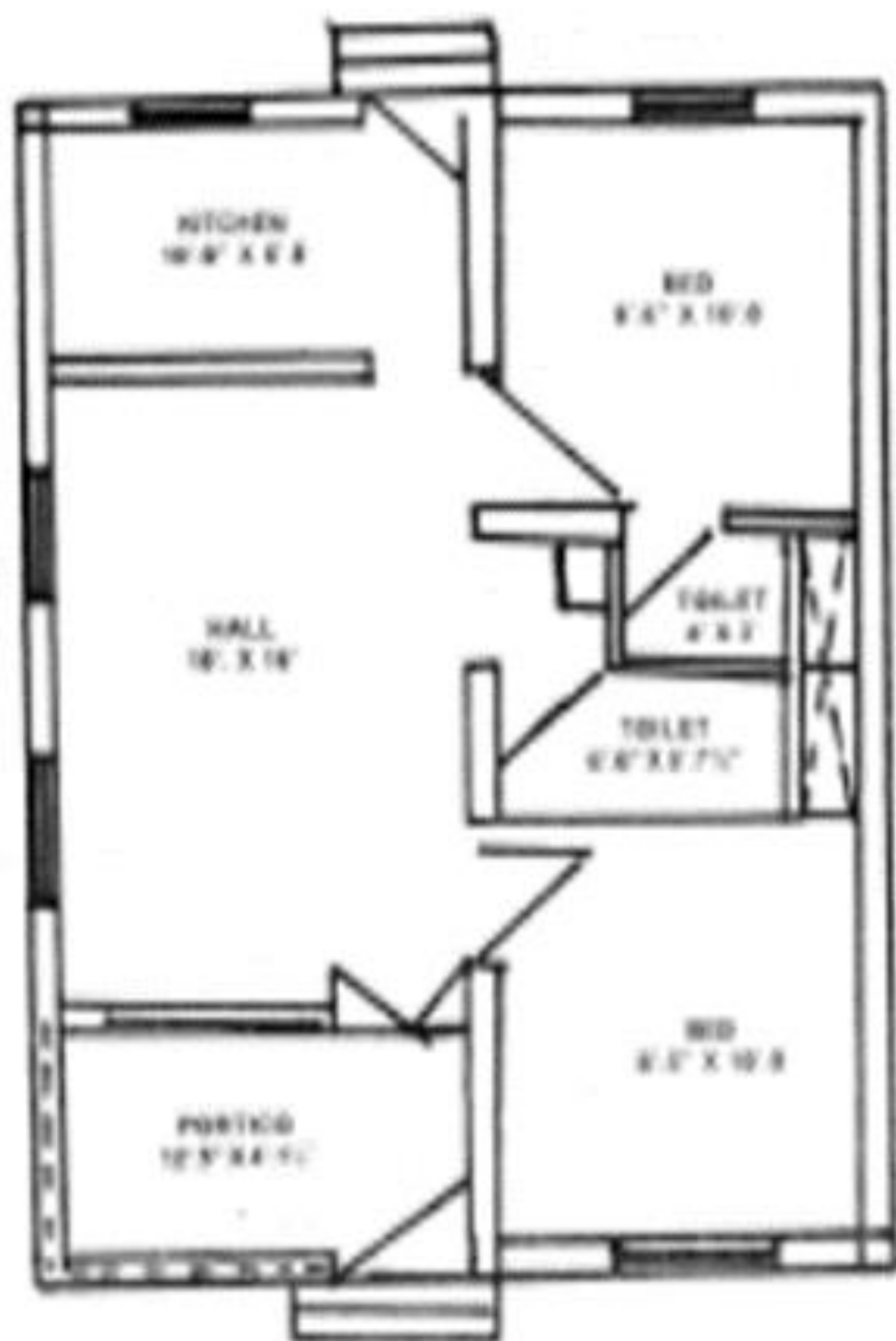


Fig. 8- Middle income group house plan Pinth area 593 sq. ft

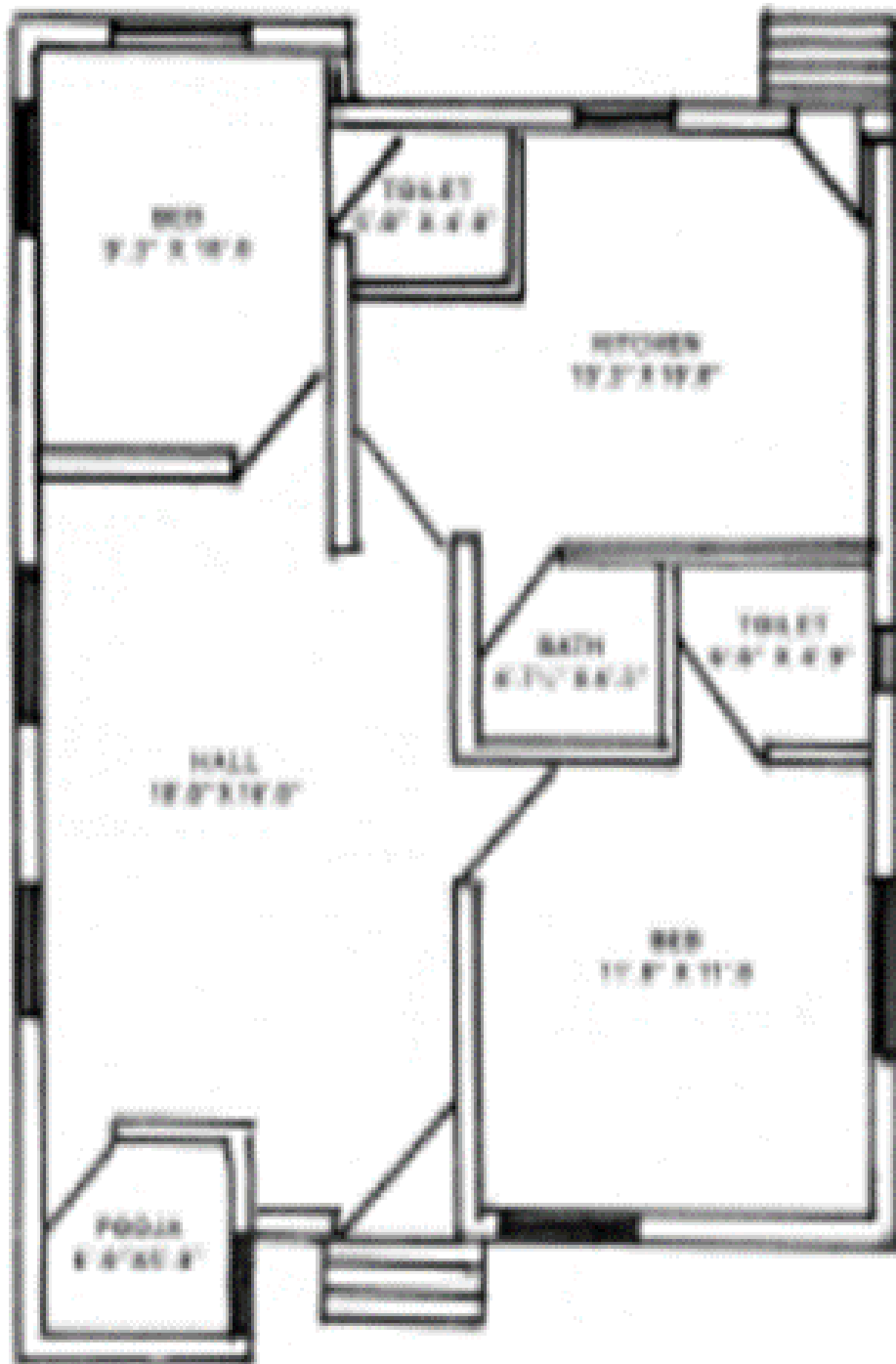


Fig. 9. High income group house plan Plinch area 798 sq. ft

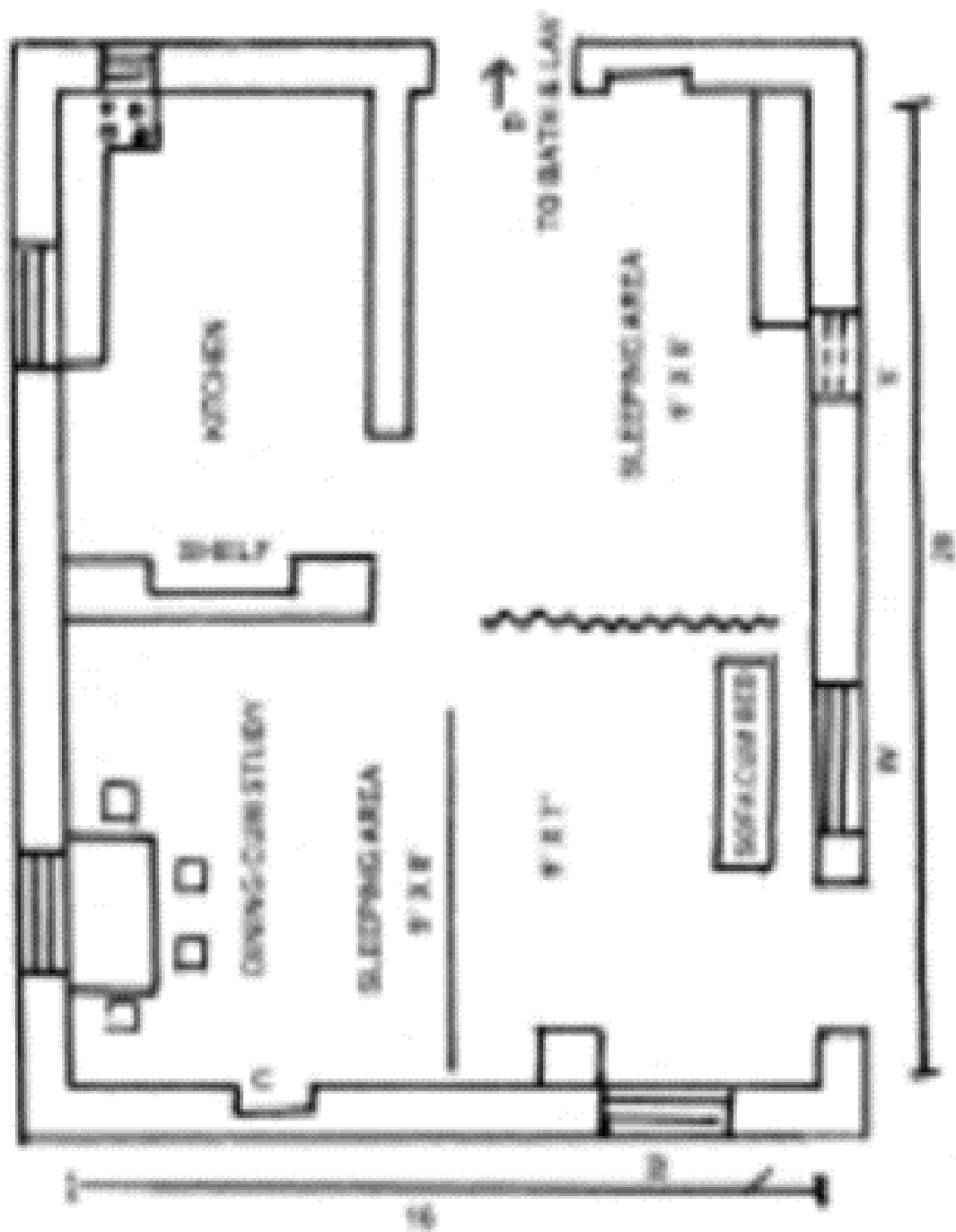


Fig. 10 - One room apartment

Principles of Organizing a House The factors to be considered while planning a house are aspect, prospect, privacy, grouping, roominess, furniture requirements, circulation, flexibility, sanitation and practical consideration.

i. Aspect

Aspect is the arrangement of doors and windows on the outside walls of a house which allows good breeze, sunshine and a good view of the nature. Aspect is also needed from hygienic point of view. With careful placement of windows, it is possible to admit sun's rays into any desired room. For example, kitchen should face the eastern side so that the morning sun's rays can purify air. Bed rooms should have southern aspect- either southeast or south west to facilitate enjoyment of good breeze. The living room can be north-east or south-east in its aspect.

ii. Prospect

It is the impression that the house creates on a person who views it from outside. It must be attractive in appearance, modern, cheerful and comfortable. A beautiful window, carved pillars, modern design on the walls and roof may add to the charm of the house.

iii. Privacy

Privacy is of two kinds-privacy of the entire house from the road side; privacy of each room from other rooms and from the entrance. Privacy from outside can be gained by planting trees and growing creepers or having a compound wall. Privacy within the house can be obtained by proper arrangement of doors and windows. Privacy to bedrooms, toilets, water closets and dressing room is of utmost importance.

iv. Grouping It is the arrangement of rooms in the house in respect to their relative positions and activities towards each other. The dining room close to the kitchen and living room, the living room near verandah, the toilet near bed room and so on. Grouping is based on convenience.

v. Roominess

It is the spacious effect a room gives to those who live in. The available space should be fully made use of. One can have built in wall cupboard, shelves and storage area so that the floor of the room is left free for various activities. The same way the space under the staircase, window sill, area below the ceiling (attic) can be made use of for storage. In addition, the size and shape of the room, the furniture arrangement as well as the colour scheme used, have a bearing over the roominess of the house.

vi. Furniture Requirement

The rooms must be planned with due thought to the furniture to be placed there. The type, the position, size and the number must be planned earlier in respect to the size and placement of doors, windows and built-ins in the room.

vii. Circulation

The circulation from room to room must be good. Good circulation means independent entry to each living space through a common space. It should provide privacy to the members and not to disturb any member doing his/her work in the room. Straight, short, direct passages must be provided. Circulation can be achieved by proper placement of the doors, grouping of the rooms and furniture arrangement.

viii. Flexibility

This means making use of a room originally designed for one purpose, for different purposes at various occasions. e.g. converting a living room to a dining hall during function, a back verandah near the kitchen to be used as play center for children, a dining room converted as

child's study center or play center. Screens, cupboards, folding partitions may help to make a room flexible and serve more than one purpose.

ix. Sanitation

It includes provision of light and ventilation and attention to general cleanliness and sanitary conveniences. There should not be any room in a house without enough light. Ventilation must be adequate. It means supplying fresh air and evacuating polluted air. Opposite windows and doors as well as ventilators must be provided for easy movement of air. Sanitary conveniences as provision for drainage of waste water, disposal of refuse and human waste must be planned ahead. **x. Practical Considerations**

One may have to take into consideration, while planning the house, the following practical points as **strength, convenience, comfort, simplicity, beauty, possibilities of extending** the house in future and above all economy.

5.1.8 Storage

Successful housing needs the provision of adequate storage facilities through out the various parts of the house. Good storage facility is needed for the following reasons.

1. Gives a neat and orderly background for a family living.
2. Avoids unnecessary waste of time and energy.
3. To have easy access to things.
4. To have maximum use of space allotted.
5. To preserve and protect the things against mice, flies, ants etc.
6. To keep things away from dust, sunlight, moisture, obnoxious gases and adverse temperature.
7. To prevent pilferages.
8. To keep things out of reach of children.

Some of the things in the house that need to be stored are clothing, bedding, food supplies, kitchen equipment, sports equipment, garden and yard tools, cleaning agents, cleaning equipment, books, medicines, disinfectants, recreational equipment, etc.

Provision for storage in a house can be made in **attics, basements, garage, shelves and built in cupboards.**

The following points should be kept in mind when planning storage.

1. Store materials and equipment near the place of work.
2. Store materials at proper heights to avoid unnecessary stooping and stretching.
3. Arrange articles properly.
4. Group articles of similar nature together.
5. Label the items stored.

5.1.9 Safety

Safety in the home refers to **prevention of accidents** so that a hazard free environment can be provided to the family members. One of the main reasons for the cause of accidents, is the manner of house construction. The following points should be kept in mind while constructing the house to avoid accidents.

1. Avoid bumpy and insecure flooring.
2. Avoid slippery and highly polished flooring.
3. Plan for storage cabinets at proper heights.
4. Avoid shelves and corners jutting into traffic lanes.
5. Light switches should be placed in proper places.
6. Electrical wiring should be done properly.

7. Stairs should have handrail.
8. The slope for stairs should be between 30-36 degrees and should not be very steep.
9. There should be sufficient landing space and head room at each flight of stairs.
10. The house should be well ventilated and well lit.
11. The terrace should have parapet walls of sufficient height
12. Use non-combustible building materials.

5.1.10 Building materials

The beauty, utility, economy, comfort and convenience of the houses generally depend to a larger extent on the selection, use and care of the building materials. The cost of building materials alone works out to more than forty percent of the total cost of the house. The materials available in our country are **natural materials and man-made materials.**

- a. Natural materials: Mud, stone, sand, wood, lime, asbestos and leaves.
- b. Man-made materials: Cement, brick, tiles, metal, glass and plastic.

a. Natural materials Mud

It is the most commonly used material in the house construction. Ever since man felt the necessity of a house, mud is widely used. Its main features are as follows.

1. Abundantly available natural material.
2. Cost is cheap.
3. Easily made and repaired.
4. Sufficiently lasting.
5. Maintain equitable temperature both in winter and summer.
6. Highly useful for low-income people.

The use of mud mixed with chopped straw and cow dung helps for coating the inner and outer walls of the house. A thin coating of mud and cement maintain the surface in a good condition.

Stone

Stone is a natural material of construction and is obtained from quarries. Since prehistoric days, it has been used for constructing different components of buildings like foundation, walls, lintels, floors, roofs etc. The stones used for foundation and walls should be sound and free from cracks and decay. Stones of different forms such as granite, marble, slate, sandstone and limestone are commonly used as building materials. Waxing and polishing make them more attractive. Gravel which are stones not larger than 2cms is essentially needed for building.

Care

should be taken in using proper sizes of stones and correct inter locking in the width of walls.

Sand

It consists of small grains of silica and is formed by the disintegration of rocks caused by weather. Sand should have the following qualities.

1. It is hard, durable, clean, free from organic matter and does not contain appreciable amount of clay.
2. It does not contain harmful impurities such as iron pyrites, salts, coal, mica, alkaline or other materials, which will affect hardening.

Wood

Wood is the nature's most abundant useful building material. It is comparatively inexpensive, strong, durable and easy to work. Mainly wood is used for paneling, ceiling, roofing, partitions, doors, windows and for making veneers and plywood. Plywood is made of odd number of woodpiles or layers laminated with plastic resins under high temperature and pressure. It is

used for doors, cupboards and decorative paneling. Deodar, teak, mango, jack, toon, mahogany and bamboo are some of the common Indian timber trees used for building purposes.

Lime

Lime has been used as a cementing material since time immemorial. In India till recently, lime has been extensively used for all types of construction purposes. Big palaces, forts, monuments, temples, bridges that were constructed centuries back and that are still existing in good condition substantiate that the use of lime for constructional purposes had reached perfection in the past. Egyptian and Romans made extensive use of lime. Even though cement has replaced the use of lime. Lime mortars have some advantageous properties like good workability, plasticity, less shrinkage on drying and durability. Lime is cheaper and easily available.

Asbestos

It is available in nature as a mineral in Marwar, Garhwal (Uttar Pradesh) and Bhandra in Madhya Pradesh. It is silicate of calcium and magnesium found in the form of very thin fibres which are elastic and capable of being woven into fabrics. It can withstand high temperature and acids without any change. It is used for roof, bathroom doors and partitions. However, it is not advisable to use asbestos as a roofing material essentially in our country since they transfer heat.

Leaves

Grass, palm leaves and palmyrah leaves are used for roof structure. They are temporary and highly inflammable.

b. Man-made Materials Cement

Cement should be used for the purpose of **durability** and **strength** of buildings. It has the quality to bind together loose particles of gravel, broken stones or other aggregates. Its quick setting property, strength and ease with which it can be used under variety of conditions has revolutionized the concept of construction. Hence it has become the most popular cementing material.

Concrete is a building material made by mixing cement, sand, gravel and water, which becomes rock-hard, when dry and set. It is fire proof, sturdy and can withstand high pressure. Because of these qualities, almost all huge structures are moulded by concrete.

Brick

It is the **most extensively** used construction material because it is locally available, cheap, strong, and durable and it has the good insulating property against heat and sound. It can be moulded to any shape or size.

Tiles

Tiles used for construction are of different types such as **flooring tiles, country tiles and marble tiles**. The **Country tiles** and **Mangalore tiles** are generally used for roofing in rural areas. Floor tiles consists of terrazzo, which are polished tiles made out of marble chips mixed with coloured sand. Mosaic tiles are cement tiles polished with a portable machine after laying. Though they are expensive, they are easy to maintain.

Metals

Metals and their alloys are the backbones of all engineering products used for construction. Metals used for construction can be classified in to two categories.

(i) **Ferrous metals** wherein iron is the main constituent. (e.g.) Cast iron, wrought iron and steel.

(ii) **Non-Ferrous metals** wherein iron is not the main constituent. (e.g.) Aluminum, Copper, zinc, lead and tin. Iron and steel occupy the most important place in the

construction of huge structures. Steel is produced by combining iron and carbon chemically, heating it to red-hot and cooling it suddenly. Steel is used as reinforcement in reinforced cement concrete. Metals have great tensile strength and are lighter than wood. Metals are both malleable (Capable of being beaten into any shape or rolled into sheets) and ductile (Capable of being drawn into wires of variable thickness).

Glass

Glass has been extensively used for **glazing doors and windows**, for **insulation and for decoration**. Rapid advances in glass technology have opened up new avenues for its use. Glass plate is heated and then suddenly cooled to temper it. This tempered glass is much stronger and is used for glazing entrance doors, or in making table tops, shelves, counters, etc. Glasses are also used for sound proof partitions.

Plastics

Plastics have become a versatile material of modern times. Plastics are available in a variety of forms to suit varied requirements. It is fast replacing many conventional materials like timber, aluminums etc. Plastics are used in electric and sanitary fittings like electric points, switches, holders, insulators, water closet seats and domestic furniture. While selecting the building materials, the following factors are to be considered:

1. Utility
2. Ease of maintenance
3. Durability
4. Availability
5. Process of installation
6. Cost
7. Family's taste and preference
8. Fashions of the present day.

Prefabrication

Architects have long been aware of the need for less expensive ways of building and have recognized the potentialities in prefabrication. Prefabrication is the process of assembling the different architectural structures like roof, walls, floors, windows etc., from standardized factory-built components. Reasons for prefabrication in houses are

1. Prefabrication reduces the cost of construction, shortens construction time and assures a specified degree of quality.
2. Inadequate housing for millions of people.
3. At the present rate of population growth millions and millions of new dwelling unit will be needed within the next few years. Enormous social problems can be solved only if satisfactory housing at realistic costs can be provided which is possible by prefabrication.

Care of the house

Proper care and maintenance of the house is important to keep our living environment clean, healthy and livable. To clean means, to remove dust that has settled, dirt or foreign matters that has adhered to various surfaces and discoloration of various surfaces.

Dust

These are both **organic and inorganic loose particles** deposited from the air. Examples: powdered earth, sand, hair, pollen etc. As these are light in weight it floats above in the air and settles on any surface. As it is easily disturbed, careful attention should be given in the removal of dust.

Dirt

These are dust held firmly by moisture, or grease on rough surfaces. **Foreign matter** These include chemical compounds formed due to the reaction of air or food with metals. Example: rust. Cleaning involves various kinds of operation, knowledge, abilities and skills and hence it is important to know the reasons, types of cleaning and the different types of cleaning implements used in the upkeep of the house.

Reasons for cleaning

1. To make the house look neat and tidy.
2. To keep the environment clean.
3. To protect things from destruction.

Types of cleaning

Cleaning can be classified into three types. They are

- 1. Daily cleaning:** This includes sweeping and mopping of floors, dusting of various surfaces, removing superficial dust from carpets, shaking of curtains and making beds.
- 2. Weekly cleaning:** This needs more attention and time. This includes removing dust or dirt by scrubbing, vacuum cleaning of carpets, cleaning of shelves and cupboards, cleaning of toilets, bathrooms and washbasins. This sort of cleaning is usually done during weekends.
- 3. Periodical cleaning:** This involves more amount of time and work. This includes airing the mattresses, getting rid of insects, pests, washing heavy draperies and carpets, polishing the floor and furniture etc. This sort of cleaning is done occasionally or before certain festivals.

Cleaning implements

Cleaning method depends upon the amount of soiling, the nature of the substance to be cleaned and the purpose for which the article is used.

- 1. Dusters:** They are made of cotton fabrics and are used to wipe dust from hard surfaces.
- 2. Mop cloths:** These are a kind of dusters used for mopping floors, stairs, ledges and shelves. They are of different types namely impregnated mop, static mop and disposable mop. They have a handle with polyester or cotton head.
- 3. Rag:** These are used for applying polish which are thrown away when dirty.
- 4. Chamois leather:** This is supple thin leather used for wiping windows and glass.
- 5. Scrim:** This is loosely woven linen material which has high absorbency and does not leave lint. It is often used to clean windows, glass and mirrors.
- 6. Brushes:** They are available in various sizes and shapes. The bristles are made of plastic, nylon and coconut fibers. They are used to clean toilet pans, carpets, clothes and furniture.
- 7. Brooms:** Brooms are either soft or hard depending on the type of material used. They are available in different varieties. They are used to clean interior floors. Yard brooms are stiff and are used to clean exterior floors.
- 8. Dust pan:** This is used for collecting dust and dirt. They are available in different shapes and colours, sizes and materials
- 9. Buckets and basins:** They are used for carrying water for cleaning. They are available in different shapes, sizes, colours and materials.
- 10. Stools and Ladders:** These are used for reaching high places in the house for removing cobwebs, clean lamps and fans.
- 11. Vacuum cleaner:** This is a motorized cleaner used for sucking dust. This has a disposable dust bag, brushes and tube nozzles. The suction created by a revolving fan helps in drawing the dust from the article into the dust bag. They are used to collect dust from carpets, upholstery and are used in high dusting and to collect dust from inaccessible areas.

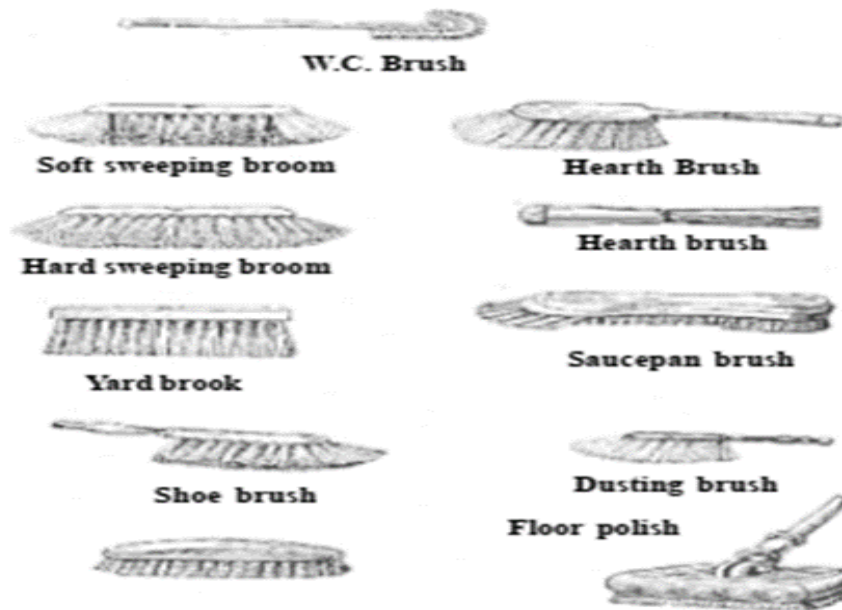


Fig. 1 la - Types of Brushes

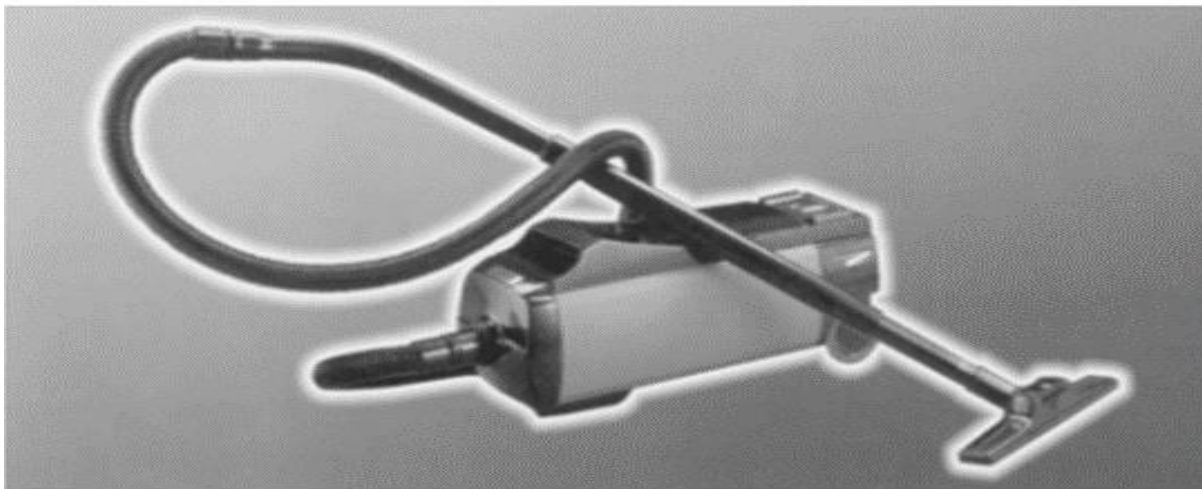


Fig.11b-Vacuum cleaner

Cleaning agents

- 1. Soaps:** These are alkaline salts of fatty acids. They emulsify the grease on the articles.
- 2. Detergents:** Detergents are effective in all types of water. They are non-soapy, synthetic materials.
- 3. Abrasives:** They are used to remove dirt by scrubbing and cleaning the surface. Examples of abrasives are saw dust, nylon mesh, steel wool, ash and brick powder.
- 4. Disinfectants:** These are used after cleaning to get rid of microorganisms.
- 5. Grease solvents:** These are used to remove grease. Eg. Petrol, kerosene, spirit.
- 6. Lemon, vinegar and salt** are used for removing tarnishes from metals.

7. Bleaches: These are used to remove stains from toilets, sinks and mosaic floors. They are obtained in liquid and powder forms.

8. Linseed oil, varnish and wax polishes are used to polish **unpainted** wood

9. Polishes: Jeweler's rouge and silvo are used for polishing silver and brasso for polishing Brass. These are commercially available in the market.

10. Shikakai: This is used for cleaning tarnishes, metals.

House Hold Pest

Control of pests in the house is an integral part of home management. Some insects do good, but most insects do harm. Some are the direct causes of disease while others are indirect forms. These pests can be divided into three types based on their tendency's bloodsuckers, polluters of food and destroyers of property.

Ants: They live in colonies in soil and in garbage. They can be controlled by

1. Poisoning with sodium chloride by spraying it into cracks where they abide.
2. Keep the legs of food safes standing in vessels of water with a little oil.
3. Dust borax in their haunts.

White ants: These are **most destructive** of all household pests. They cause damage to wood and wooden articles. They can be controlled by

1. Wooden post erected on earth should have cement foundation.
2. If they are planted into the earth directly, the sunken part can be coated with thick tar.
3. Boiling water or kerosene may be used to kill them.
4. Cracks should be filled up with cement.

Bed Bugs: These are round flat insects reddish brown in colour. They live on **human blood**. They breed on crevices of walls, floors, beds and other furniture. They can be controlled by

1. Plastering crevices on ceilings, walls and floors.
2. Sun dry bed sheets, cloths and hangings at least once a week.
3. Spraying pyrethrum in crevices.
4. Fumigation with ethylene oxide.

Book lice: These pests devour the paste used for binding books and framing pictures. They sometime breed on mattresses and upholstered furniture. These can be controlled by airing the rooms every day.

Cockroaches: The colours vary from dark brown to black. They feed on leather, books, starchy fabrics and all kinds of food. They live in drains and pipes. They are found mostly in kitchen and dining rooms. The control measures are

1. Do not keep any food item open.
2. Using repellents like borax or pyrethrum powder.
3. Thorough cleaning to remove unpleasant odour.

Crickets: They cause a **lot of damage to wood**. The way of controlling them is to keep the areas clean or spray borax.

Houseflies: Flies are very dangerous insects as they play a major role in **spreading diseases** like typhoid, cholera, tuberculosis, dysentery and diarrhoea. They can be controlled by

1. Cover all garbage items.
2. All food items should be covered.
3. Destroy the eggs with kerosene or borax.
4. Use flypapers made of 5 parts of castor oil and 8 parts of resin powder, to which flies will get stuck and die.

Mosquito: They suck blood, inject germs. There are different types of mosquitoes namely **anopheles** which causes malaria, **culex** which causes filaria and **qedes** which causes yellow fever. The control measures are

1. Stagnation of water should be avoided.
2. Wells and tanks should be covered properly.
3. D.D.T powder suspended in water can be sprayed.
4. Mosquito nets can be used over beds and windows to prevent entry of mosquitoes.
5. Kerosene can be sprayed in open drains to destroy larva.
6. Incense and other repellants like neem leaves, tobacco and camphor can be burnt.
7. Eucalyptus oil or lavender oil can be rubbed on the skin.

Silver fish: They attack paste used for bookbinding, framing pictures and starched clothes. The control measures are

1. Clean pictures, photograph and glass frequently.
2. Use D.D.T powder or pyrethrum powder.

Mice: They get attracted by the warmth of the building and the food in the house. They destroy clothes and newspapers. They can be controlled by blocking all possible points of entry and placing rodenticides.

Pests: This could be controlled to a greater extent if the house is kept clean. To keep the house clean, it is important to know the various ways of collecting and disposing waste in a hygienic manner.

Waste disposal

The wastes that are produced in the house should be collected and disposed off in a proper manner. There are two types of household waste. They are

1. Refuse: This is made up of solid organic waste in a decomposing or non-decomposing state, excluding body wastes. Examples are garbage and rubbish.

2. Sewage: This is waste water containing solid and liquid excreta.

Reasons for waste disposal

1. To avoid contamination of soil
2. To prevent ground water from getting polluted.
3. To prevent breeding of flies and other harmful microorganisms that spread diseases.
4. To keep the surroundings clean.
5. To protect the surroundings from obnoxious odour. The domestic refuse should be collected in a container or bin which has a tight-fitting cover. The bins must be kept away from cooking area.

Methods of refuse disposal Dumping: This is filling up empty pits with refuse or reclaiming low-lying lands. If dumping is done under proper supervision and during dry season it is called “**Controlled dumping**”.

Sanitary land fill: This is dumping the refuse material in a trench and covering it with 15cm layer of earth.

Compost formations: This method is used mainly where refuse is to be disposed off with night soil and to convert the waste into humus.

Sorting: This method consists of sorting the refuse into soft core which consists of animal and vegetable organic matter which can be used as manure and hardcore which consists of broken bottle, crockery tiles, etc. which can be used for metaling roads.

Incineration: This is one of the best methods of refuse disposal. In this method, the refuse is burnt in incinerator and reduced to ashes,

Sewage disposal: The best method of disposing sewage is through water carriage system. In big cities, this system leads to the sewer systems and in small towns it may lead to septic tank.

Dilution is a method in which the sewage is disposed into water sources such as rivers, streams and sea, after having been suitably treated. The solid part obtained from this treated sewage is used as manure in fields. A well-maintained house will create a healthy and safe environment to live in. But one should also know to add beauty to the house, by decorating its interiors in a pleasant way.