# FLOWER ARRANGEMENTS

#### Importance of Flowers and Flower arrangements:

- 1. Flowers symbolize beauty, love, affection, peace and tranquillity.
- 2. Flowers are commonly used in ceremonies, festivals and for home decorations.
- 3. A good flower arrangement should have attractive colour combination, size, quality, firmness, harmony and distinction.
- 4. The flowers bring indoors a colourful beauty of nature.
- 5. Flower arranging is an art and skill providing employment to many people. Flowers are arranged aesthetically in vases of different shapes, sizes, material and colours.
- 6. Earlier days flowers were held in pin holders/wire meshes.
- 7. Recently floral foams are available called 'OASIS' which is a water absorbent material providing a firm base and enough moisture to the flowers.

### PRINCIPLES OF FLOWER ARRANGEMENT

Although the art of floral arrangement encompasses many principles, there are atleast six important principles. They are as follows:

1. **Design:** It decides the structural pattern of the floral arrangement. It is a visualized plan about the size and shape of the floral arrangement. The design is essentially determined by the location, occasion and the materials available.

- 2. Balance: It emphasizes on the use of materials in a floral arrangement which gives stability to the arrangement. The two most important elements of balance are the form and color of the floral arrangement. The balance can be symmetrical or asymmetrical, based on the amount of materials placed on either side of the floral arrangement. Colours play a vital role here. Dark colours give a visual effect of weight and so are used low in the arrangement. So also, lighter colours are more appropriate for outer and upper portions of the floral arrangements.
- 3. Scale: It deals with the proportions of different components of the floral arrangement. It thus emphasizes on the use of materials used to that of the size of the container, holding the floral arrangement.
- **4. Rhythm:** It emphasizes on directing the viewer's eye along the main line of arrangement so that the whole shape of the composition is properly followed and understood.

- 5. Emphasis (Focal point): The central portion of the floral arrangement from where the flowers and foliage of the arrangement appear to be emerging from, is known as the focal point of the arrangement. Hence, larger and dark flowers are usually used in the focal point of the floral arrangement.
- 6. Harmony and Unity: This principle takes care of the appropriate use of flowers for various occasions. It also takes care of the blending of colours of the flowers used in the floral arrangement and that of the container such that they contrast each other.

## INDIAN FLOWER ARRANGEMENTS:

## 1. Floral Rangoli

- It is colourful design made in a flower either flowers/petals during several Indian ceremonies.
- It is common in Kerala and other Southern states where initially Rangoli was made using wide flowers collected during the early hours during the day.
- It has now become very popular and competitions are held to encourage people.
- It can be of any shape but circular is a most popular shape consider.
- First an outline of the design is made with chalk then contrasting colours are decided and then the petals are placed compactly to give an attractive design.
- At the centre a focal point is made around which the design stands harmoniously.

1.	Orange	:	Marigold & Rose
2.	Yellow	:	Chrysanthemum, Marigold, Rose
3.	Red	:	Rose & Balsam (Terda)
4.	Pink	:	<i>Nerium</i> , Balsam
5.	Purple	•••	Aster
6.	White	•••	Tagar, Kagda, Lily (Pancratium), Jasmine, Tuberose
7.	Green	:	<i>Aralia</i> (Jhipri)

Flowers used for making a rangoli are:

## 2. GARLANDS

- Garlands are prepared using either one type of flower or a combination of different flowers.
- They are made using cotton thread, nylon thread or sutali/coir.

- To make them more attractive, jerri, foilage, coloured wool etc. are used between the flowers.
- The flowers are tied either with thread using needle/by hand.
- Different types of garlands are made for different occasion.
- For marriage ceremony/welcome parties, sweet scented flowers like jasmine, mogra, tuberose, tulsi leaves etc. are used. For religious functions and decorations eg: Marigold, *Chrysanthemum*, Tagar, *Pancratium*, *Hibiscus* Flowers, Durva leaves etc. are used.

For eg:

1.	Durva& Hibiscus Garland	:	Ganapathi
2.	Hibiscus	:	Kali Maa
3.	Bauhinia	:	Saraswati
4.	Datura	:	Lord Shiva
5.	Lotus &Tulsi	:	Vishnu & Mahalakshmi



- Attractive Garlands are made with large pendants attached at the centre.
- 3. GAJRA

- These are mini garlands and look like short chains of flowers which are two-sided and may dangle or wrap around the basic hair-do.
- The length of the gajra varies from 6-12 inches.
- So gajra flowers are taken in needle and are knotted together.
- The flowers are placed closely without exposing the thread much.
- Usually only fragrant flowers are used. Flowers used are Jasmine, Aboli (*Crossandra*), Kagada, and Jhipri (*Aralia*) leaves.
- The attractive combination of different coloured flowers along with great foliage may be used.

### 4. VENI



- This is a special kind of flower arrangement which is stiff and is worn around in the hair-do.
- It is usually facing one side of the stocks.
- On the opposite side, for stiffness of veni, strings or sutali are used.
- Four strings are taken along with thread to make a channel.
- The flowers are inserted into the channel and reknots similar to button stitch are made to hold the flowers in positions.
- Coloured thread, golden or silver threads are also used.
- The flowers used are *Chrysanthemum*, Tuberose, small Marigold, and *Aralia* leaves.

### 5. FLORAL BOUQUETS



- A flower bouquet is a collection of fresh flowers in a creative arrangement.
- Flower bouquets can be arranged for the decor of homes or public buildings, or may be handheld.
- Handheld bouquets are classified by several different popular shapes and styles.
- Flower bouquets are often given for special occasions such as birthdays or anniversaries. They are also used extensively in weddings.
- Bouquets arranged in vases or planters for home decor can be arranged in either traditional or modern styles.
- Symbolism may be attached to the types of flowers used, according to the culture.
- A card paper is cut into a suitable shape. The outline is marked with pencil. Required shape is extended upto a stalk and is removed from card paper. Flowers with attractive colours and combinations are selected. The plants with proper height are selected and placed in centre. Flowers are fixed with pins or cello-tape. Fillers like *Solidago canedensis, Iberis amara* (candy tuft), *Cyperus, Thuja, Nephrolepis* are used. Different varieties of *Gladiolus*, different shades of *Gerbera* are used with attractive combinations. They are covered with gelatin paper with cello-tape or stapler and bouquet is made attractive by using satin ribbon and aluminium foil or golden coloured wrap for the stock.

#### **BOTTLE GARDEN / TERRARIUM**



- Elaborate gardens are not feasible due to lack of space especially in urban areas.
  Artistic ingenuity of individuals has given rise to other methods of growing plants like terrariums, bottle and dish gardens.
- Miniature forms are excellent for display on centre-table.
- They can be prominently displayed in places where sufficient light available.
- Occasional exposure to sunlight is essential for healthy plant growth in such indoor gardens.
- High initial expenditure may be required w.r.t accessories but later the maintenance cost is less and can be maintained for longer periods of time.

### Types of bottles used for bottle garden:

Any glass vessel, bottle or flask (narrow-mouthed as well as flat bottomed round-bodied ones) is equally suitable. Other innovative ideas of terrariums can be put forward for eg. They can be made in used electric bulbs too. Transparent glass bottles are to be preferred for making a terrarium.

### Choice of plants for bottle garden:

- Dwarf species of large flowering plants like *Dracaena, Begonia, Pelargonium,* orchids can be used.
- Small and beautiful ground covers like various species of *Pilea* can be used.
- Cacti and succulents like Chlorophytum, Sedum, Scilla, Kalanchoe, Haworthia, etc.
- Marshy plants like Selaginella and Marsilea are used.

### Plan of bottle garden and potting mixture:

- A rough sketch of the landscape is to be decided first according to the aesthetic sense of the creator of the terrarium.
- Potting mixture should preferably contain decomposed compost, sand, red earth, leaf mould and garden soil in equal proportions.
- As an alternative, some crushed charcoal, few stones or brick pieces and leaf mould in dry soil can also be used.
- Fertilizers should never be used under any circumstances in a terrarium.
- The container is washed and dried. First the layer of pebbles are added followed by potting mixture. Before placing the plants in the bottle first their positions need to be decided. The smaller/ delicate varieties should be preferably kept in the periphery and main larger one in the centre. Holes are to be made at desired positions using a trowel. Planting is done starting from periphery. Plants are manoeuvred with the help of tongs, into their intended holes. The soil is then made firm around the roots. The larger plants in the centre are planted at the end.
- After planting is over the soil particles sticking to the sides of the bottle or the leaves are removed. The leaves are then moistened with a mist of clear water. After this the mouth of the bottle is closed with a plastic wrap (with a couple of holes).
- Bottle garden needs very little watering since whatever water evaporates condenses and goes back to the compost. They need a reasonable amount of light but direct sunlight will overheat the plant.

### Closed Terrarium – A balanced ecosystem:

- This is made in air-tight closed transparent glass bottles or containers.
- Idea behind this is to make the plants virtually self-sufficient.
- Oxygen produced by the plants during photosynthesis is absorbed when they respire and carbon dioxide liberated during respiration is, in turn, used for photosynthesis.
- This cycle helps the plants in a sealed bottle to remain independent for long time.
- Does not need watering as the moisture from the leaves condense and run down the sides of the bottle which is absorbed by the roots.
- Pruning is to be carried out carefully if overgrowth of plants takes place.
- If made properly, such bottle gardens can be maintained for many years too.

### **DISH GARDEN**



- Dish gardens are a type of indoor gardens made in open dishes using soil, pebbles, plants, and other aesthetic features.
- Mostly dish gardens contain cacti and succulents grown in them.
- It is essential to group the plants that thrive under the same conditions of light and water requirement.
- For dry sandy soil and full sunlight, dwarf varieties of succulents such as *Aloe, Crassula, Echeveria, Haworthia* and *Sanseviera* can be used and for moist soil, under semi-shade conditions, foliage plants such as *Aralia, Dieffenbachia,* miniature varieties of crotons, *Dracaena, Duranta, Tradescantia, Pepromia, Pothos,* spider plant and wander Jew can be used.
- The size of plants should be in proportion to the dimensions of the dish or tray used.

#### Preparation of Dish garden:

- Normally, ceramic or clay trays of any size and shape are used, containing drainage holes in them.
- Small pieces of nylon mesh should be used to cover the drainage holes and brick pieces, a coarse soil mixture of red earth, cow-dung manure and brick granules in equal proportion, and miniature rocks or white stones or marble pieces can be used.
- The rocks or stones can be placed firmly in position according to the layout.
- Taller plants should be kept at the rear or centre of the dish so that they will not block the view of smaller plants.

- A place where the plant will receive 2-3 hours of direct or bright indirect sunlight is ideal for keeping the dish garden.
- Watering is done only when soil has dried up.
- If plants in dish garden overgrow, then pruning is essential once a month to keep them at desired heights.
- Monthly spraying of liquid fertilizer is also essential.
- A dish garden can last for five years if given good care.
- Various themes can be decided for a dish garden like fairy garden, succulent garden, herb garden, bonsai garden, table top moss garden, mini cacti garden, etc according to one's choice and suitable materials can be used to make the dish garden.

#### GARDENING

Gardening is defined as the growing of plants such as flowers, shrubs and trees as a hobby or recreation. In other words, it is the practice of growing and cultivating plants as a part of horticulture. In gardens, ornamental plants are often grown for their flowers, foliage or overall appearance, useful plants such as root vegetables, leaf vegetables, fruits and herbs are grown for consumption, for use as dyes or for medicinal or cosmetic use. Gardening is considered to be a relaxing activity for many people.

Gardening ranges from fruit orchids to long boulevard plantings with one or more different types of shrubs, trees and herbaceous plants in large or small containers grown inside or outside. Gardening may be very specialized with only one type of plant grown or involve a large number of plants in mixed plantings. It involves an active participation in growing of plants and tends to be labour intensive which differentiates it for farming and forestry.

Gardens are primarily constructed for their aesthetic appeal. They provide a place for recreation and also adds greenery to the surroundings which helps in purifying the atmosphere and maintaining the balance of atmospheric gases.

#### **PRINCIPLES OF GARDENING**

Planning of garden is an art and science of all factors which regulate it like geology, soil condition, geography, rainfall, history, availability of space, light factors, etc. In the development of garden and landscape especially in olden times not much importance was given to exotic varieties. The local varieties of plants were grown in the backyard of the house and over a period of time it became a gene bank for particular species. For example, most of the houses in earlier days had *parijatak* plant for its fragrant flowers which were used as offering to God. In ancient India every temple had a garden to supply continuous flowers for making of garlands to be offered to God and every temple had a specific tree or plant which is called "sthal vriksh" and this plant was propagated in that particular surrounding. Therefore a natural landscape developed, at some times, protection was given to the plant. As the population grew, space becomes limited and therefore many areas which had these types of concepts were lost to industrial process as well as housing. Therefore the need for green space and recreation centres became essential. Therefore slowly the concept of gardening developed on a large scale. The basic principles of gardening designs are outlined below:

1] <u>Space:</u> The initial approach is to have a perfect plot of land which is ideal in all aspects of garden development, eg. accessibility, soil, availability of water, size of land, etc. But invariably all the factors are not favourable. Therefore a good designer has to take up all this into account and whatever may be the shortcomings have to be taken along the side and the garden has to be designed. For example, if the topography is having slope and the surface is rocky, the slope can be made into a small waterfall by exposing work. Therefore the effect of topography is nullified. Similarly if there is a small patch of lofty trees then that patch has to be included in the garden design. Existing plants present there has to be taken into account and if there is a natural indigenous species present, then that should be given importance and highlighted.

2] <u>Axis</u>: There should be always an imaginary line in any garden so that there is some sort of balance. In a well laid-out formal garden, the imaginary line is in the centre dividing the garden into two equal halves. But in many cases such a line is not possible, but still one can have an imaginary line and divide it into segments. A midpoint can also be created where some special features can be created.

3] <u>Focal point</u>: In every garden there should be a centre of attraction which is generally an architectural feature having a mass effect like an old stone pillar with markings. If such architectural relics are not available then some natural material like a fossilized egg or large fossilized stem pieces or scaled down model of some important monuments can be built. These things add to the educational value too.

4] <u>Mass effect</u>: The use of one general form of plant material in large number in one place is done to have a mass effect like a corner of a garden having large number of trees or large number of flowering shrubs. But again this creates a monotonous approach, therefore it can be split up into different groups and planted.

5] <u>Unity</u>: Unity in a garden is very important as it will improve the outlook of the garden. Different components of a garden have to merge in harmonious manner with each other. The aim is to give an overall impression of a garden in a gradual manner rather than highlighting one or two points. For example, if there is a rock garden, it should not suddenly merge with an evergreen forest because a rock garden is rather dry. There should be a gradual merger. A number of other features like having creepers, sand area, etc. are incorporated to get the unity in a garden.

6] <u>Proportion and scale</u>: Proportion and scale are important aspects of a garden design and is a definite relationship between area and surroundings. Rectangle or square is considered as a pleasing design. These are important in formal gardens where symmetry is maintained. In the

case of informal garden where proportion cannot be maintained symmetry is lost and in case of wild garden, the limit of forest itself is the scale. Therefore, scale and proportion operates only in city gardens.

7] <u>Mobility</u>: It is another feature of a garden where colour change appears. In the tropical countries these changes are limited. For example, colour changes in *Lantana camara* or leaf colour change in *Terminalia catapa*. If four or five trees of *Terminalia* are planted, then when the season changes the colour change appears and this gives mobility. It is more common in temperate areas during spring when there is whole lot of colour change taking place in leaves, eg. *Acer* and *Populus* plants. Maple leaves also show colour change according to seasons. Therefore, plants of these types when planted give mobility to the landscape.

#### **BOTANICAL GARDENS**

A botanical garden is a well-tended area displaying a wide range of plants labeled with their botanical names. It may contain specialist plant collections such as cacti and succulent plants, herb gardens, plants from particular parts of the world, and so on. There may be greenhouses, shadehouses, again with special collections such as tropical plants, alpine plants, or other exotic plants. Visitor services at a botanical garden might include tours, educational displays, art exhibitions, book rooms, open-air theatrical and musical performances and other entertainment.

Botanical gardens are often run by universities or other scientific research organizations, and often have associated herbaria and research programmes in plant taxonomy or some other aspect of botanical science. In principle, their role is to maintain documented collections of living plants for the purposes of scientific research, conservation, display and education, although this will depend on the resources available and the special interests pursued at each particular garden.

The origin of modern botanical gardens can be traced to European medieval medicinal gardens known as physic gardens, the first of these being founded during the Italian Renaissance in the 16<sup>th</sup> century. This early concern with medicinal plants changed in the 17<sup>th</sup> century to an interest in the new plant imports from explorations outside Europe as botany gradually established its independence from medicine. In the 18<sup>th</sup> century, systems of nomenclature and classification were devised by botanists working in the herbaria and universities associated with the gardens, these systems often being displayed in the gardens as educational "order beds". With the rapid rise of European imperialism in the late 18<sup>th</sup> century, botanical gardens were established in the

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tropics, and economic botany became a focus with the hub at the Royal Botanical Gardens, Kew, near London.

Over the years, botanical gardens, as cultural and scientific organizations, have responded to the interests of botany and horticulture. Nowadays, most botanical gardens display a mix of the themes mentioned and more; having a strong connection with the general public, there is the opportunity to provide visitors with information relating to the environmental issues being faced at the start of the 21<sup>st</sup> century, especially those relating to plant conservation and sustainability.

A botanical garden is a controlled and staffed institution for the maintenance of a living collection of plants under scientific management for purposes of education and research, together with such libraries, herbaria, laboratories and museums as are essential to its particular undertakings. A botanical garden naturally develops its own special fields of interests depending on its personnel, location, extent, available funds and the terms of its character. It may include greenhouses, test grounds, a herbarium, an arboretum and other departments. It maintains a scientific as well as a plant-growing staff, with publications as one of the major modes of expressions.

A contemporary botanical garden is a strictly protected natural urban green area, where a managing organization creates landscaped gardens and holds documented collections of living plants and/or preserved plant accessions containing functional units of heredity of actual or potential value for purposes such as scientific research, education, public display, conservation, sustainable use, tourism and recreational activities, production of marketable plant-based products and services for improvement of human well-being.

The "New Royal Horticultural Society Dictionary of Gardening" (1999) points out that among the various kinds of organizations now known as botanical gardens are many public gardens with little scientific activity, and it cites a more abbreviated definition that was published by the World Wildlife Fund and IUCN when launching the "Botanic Gardens Conservation Strategy" in 1989: 'A botanic garden is a garden containing scientifically ordered and maintained collections of plants, usually documented and labeled, and open to the public in the purposes of recreation and educational research'. This has been further reduced by Botanic Gardens Conservation International to the following definition which "encompasses the spirit of a true botanic garden". "A botanic garden is an institution holding documented collections of living plants for the purposes of scientific research, conservation, display and education".

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#### FORMAL AND INFORMAL GARDENS

There are many different types of gardens. They can be classified according to the country of their origin like Japanese garden, English garden, Persian garden etc, by historical empire like Mughal garden, Roman garden etc or by the characteristic features of garden like rock garden, sculpture garden, herb garden etc. One other way of classifying garden is as formal or informal gardens.

- 1. **Formal garden:** Formal gardens are typically symmetrical and have certain form and order to them. They have geometrical patterns and shapes. Generally radial or bilateral symmetry is seen. This type of garden is usually seen in and around historical sites, monuments and famous buildings. Many larger public gardens are also formal in nature and contain arches and pergolas. The basic principles to be taken care of while making a formal garden are:
  - Symmetry
  - Flat Ground Plane
  - Well planned pathways
  - Strong Axis
  - Enduring structural appeal
  - Defined borders
- 2. **Informal garden:** Informal gardens do not follow the rigid symmetry of the formal gardens. The design and layout is more lose and casual. Informs gardens also make use of existing features like trees, rock formations and incorporate them into the garden. Usually exotic species are not used, instead natural and readily available plants are used. These gardens are seen in public parks and many homes.

### Features of a Formal Garden:

- <u>Terrace</u> A raised flat paved or graveled section overlooks a prospect.
- <u>Pathways</u> Routes connecting different parts of the garden, giving access to other garden features.
- <u>Topiary</u> Art of creating sculptures in the medium of clipped trees and shrubs.
- <u>Hedge</u> Line of closely spaced shrubs and trees planted as a barrier or marking a boundary.

- <u>Arches</u> Supported by pillars and covered by climbing plants.
- <u>Pergola</u> Shaded walk or passageway of pillars.
- <u>Statuary</u> A full-length sculpture of person, animal or event.
- <u>Landscaping</u> Use of ornamental plants and other elements to fulfill aesthetic and functional purposes.
- <u>Pavilion</u> Free-standing structure sighted at a short distance from the main residence, whose architecture makes it an object of pleasure.
- <u>Parterre</u> Similar to an open theatre with 'orchestra seats' or 'stalls' lined by flower beds.
- <u>Sylvan theatre</u> Also known as greenery theatre, is a type of outdoor theatre, situated in a wooden setting.

#### **Types of Informal Gardens:**

- <u>Cottage gardens / Kitchen gardens</u> Real working gardens which yield edible crops as well as flowers. Informal fencing and operational gates present to prevent animals from destroying the crops.
- <u>Wild and Woodland Gardens</u> Relaxing type of garden which provides a habitat suitable not only for plants but also for local animals. Water source and safe shelter usually present. Abundance of nesting places.
- Meadow and Wildflower Gardens Modern type of informal gardening. Best way to plant an area that doesn't lend itself to more conventional cultivation. Helpful to conserve native species.

FORMAL GARDEN	INFORMAL GARDEN
They are symmetrical	They don't follow a rigid symmetrical pattern
They have a certain form and order	The design and layout is more loose and casual
Geometrical patterns and shapes present	Such features are absent
Existing features and topography are excluded	Incorporate existing features like trees and rock formations
Usually seen in and around historical sites, monuments and famous buildings	Usually seen in public parks as well as many homes
All types of species are preferred in such gardens	Usually exotic species are not used, instead readily and naturally growing species are used

## **RANI BAGH / VEERMATA JIJABAI BHOSLE UDYAN**

- Formerly called Rani Bagh or Victoria Gardens, this garden is now known as Veermata Jijabai Bhonsle Udyan.
- It is a zoo and a garden located in Byculla, in the heart of Mumbai city.
- The garden was laid out in 1861.
- It is one of the oldest zoos in India.
- Also situated in the premises of the garden is the Bhau Daji Lad Museum (formerly called Victoria and Albert Museum) mainly containing artefacts of industrial and agricultural interest.
- On the grounds to the east is the giant statue of an elephant taken from Elephanta Caves on Gharapuri to Britain in 1864 and later returned to these gardens.
- Originally this garden was the property of the wealthy Jewish businessman David Sassoon.
  He built the Victoria and Albert Museum, designed by a famous London architect.
- Its structure from inside is the same as Magen David synagogue of Byculla.
- He donated his whole property to the Municipal Corporation of Mumbai, which became today's zoo & garden, a popular tourist attraction.
- He also built the Victoria tower, with its clock, still present in the garden though not functional presently.
- The garden is spread over 48 acres (19 ha) in Byculla, on central side of Mumbai, surrounded by many *chawls.*
- A clock tower is present at the main entrance, reminiscent of Italian Renaissance, but which has stopped ticking long ago.
- Statue of the King Edward VII was made as a gift by David Sassoon. It is made of black stone and is kept in the Fort area. Due to its popularity, the area came to be known as *Kala Ghoda*. It was moved to Jijamata Udyan after the Independent Government of India decided not to keep any of the British ruler statues in public.
- Amazing thing about the garden is that it has Ornamental Gateway and an arched architectural screen enriched with a building in Greco-Roman style.

- The entire garden is well planned having small and big paths, water features, edges and hedges, avenues, focal points, gazebos, topiaries, etc.
- The garden also houses a nursery with a small greenhouse in which various types of plants in the form of saplings are available for purchase.
- Every year in February there is a Flower Show and Exhibition organized at Rani Bagh in which all types of ornamentals, bonsais, medicinal plants, fruit and vegetable plants, flower arrangements are beautifully displayed for enriching the value of nature to the visitors.
- Jijamata Udyaan also houses the Mumbai Zoo. It houses many rare and endangered species of animals & birds besides some stuffed animals by talented taxidermists. Recently new members were added to the garden in the form of penguins and the garden authorities are trying their best to revamp the garden in order to attract more visitors and enhance the life of the animals in it, though in captivity.

### Plant Species found in Rani Bagh:

Some of the interesting plants found in this garden are mentioned below:

- 1. *Roystonea regia* (Bottle palm) These are ornamental palms with bottle-shaped trunk uniformly planted as avenue trees along the broader paths in the garden.
- 2. *Couropita guanensis* (Cannon ball tree) Producing highly fragrant flowers in cauliflorous inflorescence, this tree is famous for its big heavy fruits too.
- 3. *Acacia auriculiformis* (Australian Acacia) It is an exotic species bearing phyllodes but once it flowers, the whole tree gets a yellowish tinge due to its minute yellow flowers.
- 4. *Canna indica* (Canna) The plant is widely grown in gardens for its ornamental flowers which are asymmetrical.
- 5. Ficus krishnae (Krishna-vad / Krishna's butter cup) It is an extremely rare species and only one individual is found here in Rani Bagh. It is called so due to its folded portion of the lower part of leaf lamina giving the appearance of a cup. It is being conserved with the help of techniques like air layering.
- 6. Adansonia digitata (Baobab tree / Gorakhchinch / Bottle tree) This is another star attraction of the garden located right near the entrance. The unique part of this tree is its huge stout short trunk which ends abruptly into many branches. Flowers are white globose and are pollinated mainly by bats.

- 7. *Melaleuca leucodendron* (Shitaanshu) Leaves are modified to form phyllodes in this tree and the unique feature is the soft trunk and bark of this tree.
- Samania saman (Rain tree) This is one of the focal points in the garden. It is due to its huge canopy of many branches bearing rhomboidal leaflets. Many bats are found hanging upside down on this tree.
- 9. *Nymphaea* sps. (Water lily) There is a water garden inside Rani Bagh in which many water lilies are found with rotund leaves and bearing big colourful lilies, adding to the aesthetic sense.
- 10. *Callistemon lanceolatus* (Bottle brush) This is another ornamental tree, commonly called so due to its red coloured inflorescence having the appearance of a brush used to clean test tubes and narrow bottles.
- 11. Many species of flowering plants are grown in the garden in suitable flower beds and hedges like *Duranta, Mussaenda, Acalypha, Bougainvillea, Pancratium,* etc.
- 12. Other tree species found in the garden are *Casuarina equisetifolia*, *Cycas*, *Pinus*, *Araucaria*, *Lagerstroemia speciosa* (Pride of Maharashtra), *Psidium guajava*, *Artocarpus hirsutus*, *Parkia biglandulosa* (Chendu phal), *Adenanthera pavonia* (Ratan gunj), etc.
- 13. Ornamental foliage plants like Sanseviera, Dieffenbachia, Agloenema, Croton, Dracaena, Nephrolepis, Adiantum, etc. are also cultivated at suitable locations in the garden.

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