

# Description and identification of Family Meliaceae, M.Sv.II Lab course I

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***Melia azedarach***



***Azadirachta indica***



## **SCHEME TO DESCRIBE A FLOWERING PLANT**

The following two schemes to be used while describing and identifying a flowering plant.

### **SCHEME -1**

The list of characters used to describe the plants are (Habitat, Habit. Root , Stem, Leaf, Inflorescence, flower, calyx , corolla , androecium, gynoecium, fruit, seed, floral formula , Classification and Identification).

All the above characters should be described in scientific terminology.

### **SCHEME -2**

**2. Drawing the diagrams of plant**

(a flowering twig , a flower , L.S. of flower, androecium, gynoecium, T. S. of ovary and floral diagram).

# FOLLOWING ARE THE CHARACTERS OF GIVEN PLANT -1

**Stem** –Woody , much branched, erect, solid.

**Leaves** - Pinnately compound, imperipinnate, exstipulate, leaflet asymmetrical, acute apex, serrate margin.

**Inflorescence** - Cymose panicles

**Flower** - Pedicellate, ebracteate, complete, hermaphrodite, hypogynous, pentamerous, , with a nectariferous disc .

**Calyx** - Sepals 5, small , gamosepalous , valvate aestivation.

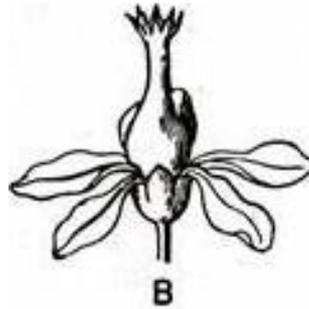
**Corolla** - Petals 5 polypetalous , imbricate aestivation, white in colour.

**Androecium** - Stamens 10, monadelphous , forming a tube, anthers dithecous , introrse.

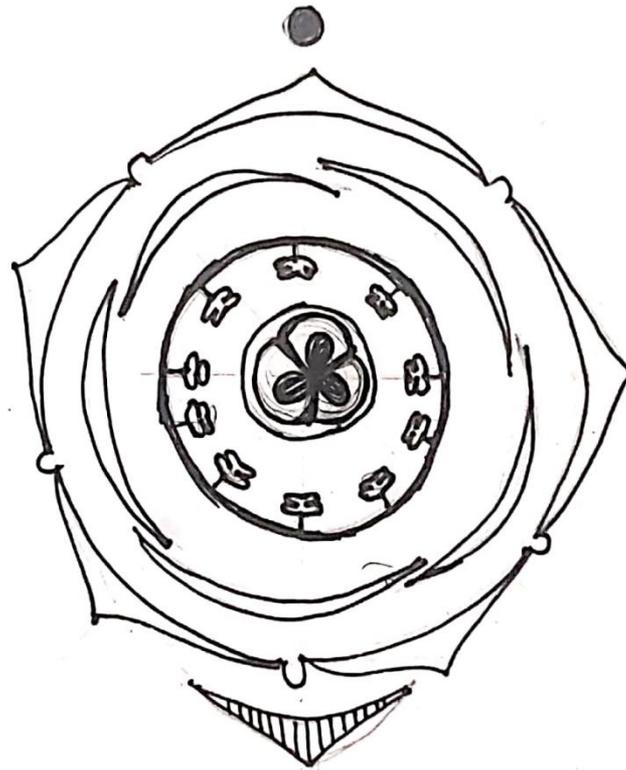
**Gynoecium** - carpels 3, syncarpous, 3 locular , 1 ovule in each locule , axile placentation, stigma capitate.

**Fruit** - Drupe.

Floral formula -  $B_{\times} \oplus \overset{\uparrow}{\underset{\downarrow}{\text{K}}}(5) C_5 A_{(10)} \underline{G}_{(3)}$



*Azadiracta indica* juss A .leafy twig with panicles B.flower C. Staminal tube with anthers D. flowers with petals removed to show ovary E.fruit.



Floral diagram: Azadirachta indica

Floral formula-  $B\gamma \oplus \overset{\uparrow}{\underset{\downarrow}{\phi}} K(5) C5 A(10) \underline{G(3)}$

## **Classification and identification**

- 1. Venation reticulate**
- 2. Flower pentamerous**

**Class - *Dicotyledonae***

- 1. Petals free**

**Sub- class - *Polypetalae***

- 1. A disc is usually present below the ovary.**
- 2. Ovary superior and flowers hypogynous.**

**Series - *Disciflorae***

- 1. Disc usually adnate to the stamen or reduced to gland.**

**Order - *Geraniales***

- 1. Leaves pinnately compound , exstipulate, leaflets asymmetrical**
- 2. Flowers in cymose panicles**
- 3. Stamens form a staminal tube**

**Family – *Meliaceae***

- 1. Compound leaf, alternate, margin serrate**
- 2. Woody branched tree**

**Genus - *Azadirachta***

- 1. Flowers white and fruit with single seed.**
- 2. Fruits on ripening, aromatic with garlic like odour.**
- 3. It is native of India and are of great medicinal value.**

**Species - *Azadirachta indica***

**(Common name –Margosa , local name - Neem)**

## **FOLLOWING ARE THE CHARACTERS OF GIVEN PLANT:-2.**

**Stem** -Woody much branched, erect, solid.

**Leaves** - Bipinnately compound , imperipinnate, exstipulate, leaflet asymmetrical, acute apex, serrate margin.

**Inflorescence** – Axillary panicle cyme

**Flower** - Pedicellate, bracteate, bractiolate, complete, hermaphrodite, hypogynous, pentamerous, with a nectiferous disc.

**Calyx** - Sepals 5, small , polysepalous , quincuncial aestivation.

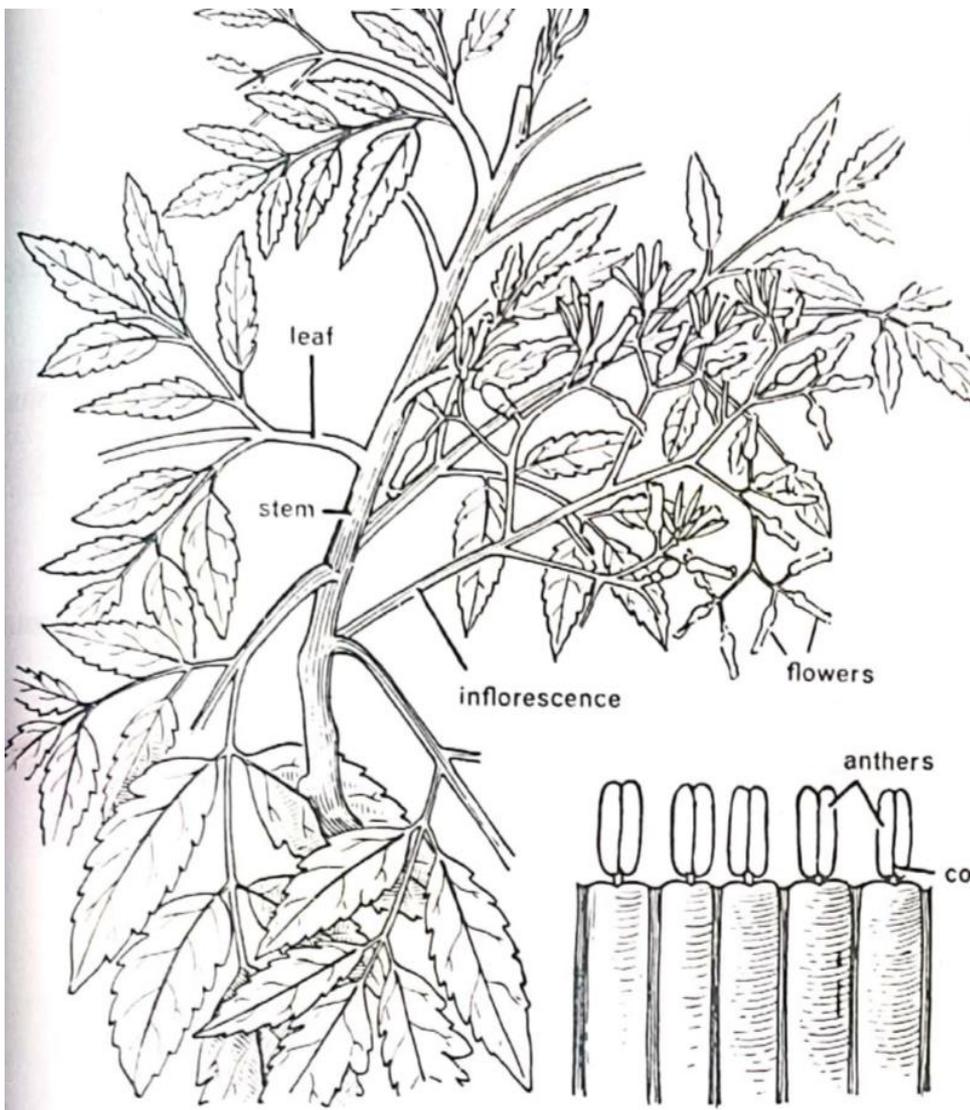
**Corolla** - Petals 5 polypetalous , quincuncial aestivation, purple (lilac) in colour.

**Androecium** - Stamens 10, monadelphous forming a tube enclosing the ovary , anthers dithecous , basifixed , introrse.

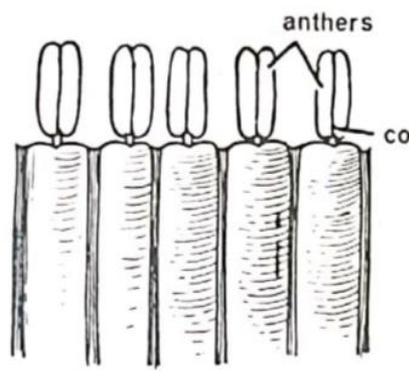
**Gynoecium** – Pentacarpellary , syncarpous, 5 locular , 1 ovule in each locule, axile placentation, style slender

**Fruit** - drupe.

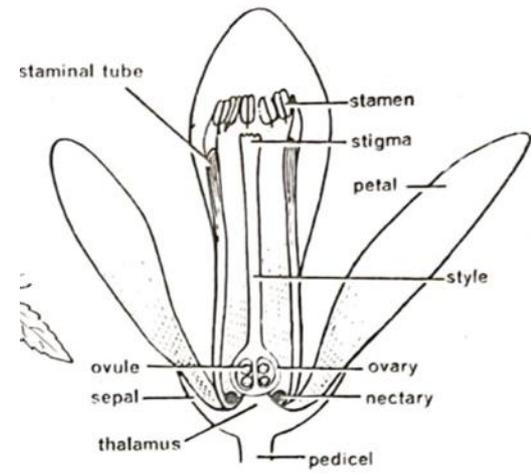
**Floral formula** -  $Br\ brl\ \oplus\ \overset{\uparrow}{\underset{\downarrow}{\text{Q}}}\ K_5\ C_5\ A_{(10)}\ \underline{G}_{(5)}$



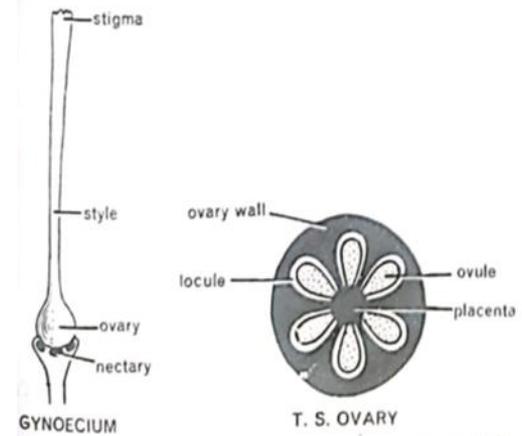
A FLOWERING TWIG



PORTION OF STAMINAL TUBE  
(inner view)



L. S. FLOWER



GYNOECIUM

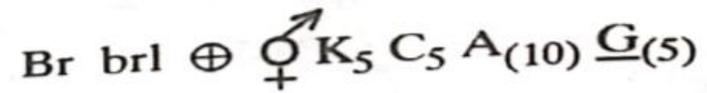
T. S. OVARY

***Melia azedarach***



Floral diagram of *Melia azedarach*

Floral formula -



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**Order - *Geraniales***

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- 2. Flowers in cymose panicles.**
- 3. Stamens form a staminal tube.**

**Family – *Meliaceae***

- 1. Bipinnately compound leaf, margin serrate.**
- 2. Woody drooping branched tree.**

**Genus - *Melia***

- 1. Flowers purple and fruit with many seeds.**
- 2. Fruits are poisonous to humen.**
- 3. Fruits are hanging on the tree in clusters.**

**Species - *Melia azedarach***

**(Common name - Pride of India , local name – Bakain)**

Thank you