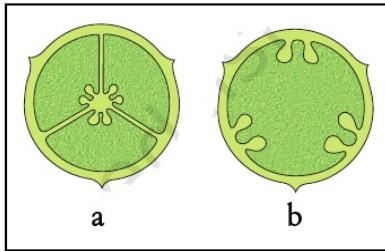


**PREVIOUS QUESTIONS XI 2012-2024 : Chapter 3 -Morphology of Flowering plants**

**1Mark Questions**

1. Observe the following diagrams "a" and "b" and identify the placentation.



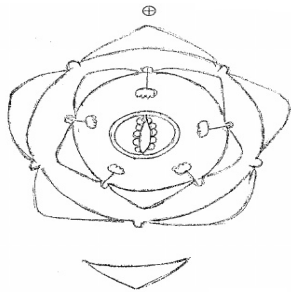
*2012 Imp.*

2. Observe the given relation and fill in the blanks.

- a) Plumule : Coleoptile  
 Radicle : .....
- b) Starch : Amyloplast  
 Fat : .....

*2013 March*

3. Observe the floral diagram and answer the following questions:



- a) Name the family  
 b) Write the nature of stamen

*2013 Imp.*

4. By examining the four matchpairs given below, find the correct matched pair from the alternatives given below.

(i) Racemose - Peduncle grows indefinitely
(ii) Epigynous flower - Ovary superior
(iii) Phyllotaxy - Arrangement of leaves on the stem
(iv) Coleoptile - Envelope covering the radicle

- a) (i) and (ii)  
 b) (ii) and (iv)  
 c) (ii) and (iii)  
 d) (i) and (iii)

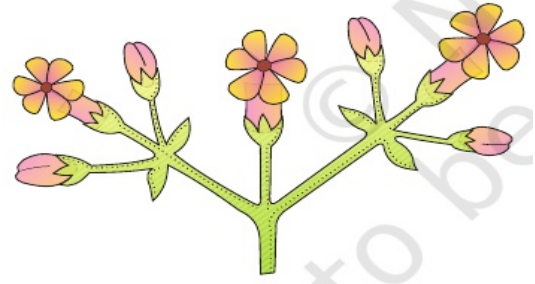
*2016 Imp.*

5. Observe the relationship between the first two terms and fill in the blank.

Epipetalous Stamen - Brinjal  
 ..... - Lily

*2018 March*

6. Observe the figure and identify the type of inflorescence.



*2019 Model*

7. Choose the correct answer.

The arrangement of veins and veinlets in leaf lamina.

- a) Phyllotaxy.                      b) Venation.  
 c) Inflorescence.                d) Placentation.

*2019 1st term*

8. Fill in the blank.

A flower having both Gynoecium and Androecium is \_\_\_\_\_.

*2021 Sept.*

9. Fill in the blank.

The type of inflorescence in which main axis continues to grow is \_\_\_\_\_.

*2021 Imp.*

10. The large shield shaped cotyledon of monocot seed is \_\_\_\_\_.

*2023 2nd term*

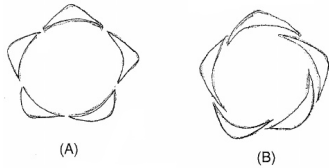
11. The pattern of arrangement of leaves on the stem or branch is called \_\_\_\_\_.

*2024 Model*

**PREVIOUS QUESTIONS XI 2012-2024 : Chapter 3 -Morphology of Flowering plants**

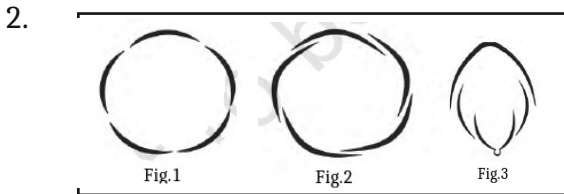
**2 Marks Questions**

1. The following figures show two types of aestivation. Answer the following questions.



- a) Identify the types A and B
- b) How will you distinguish A and B ?

*2013 Imp.*

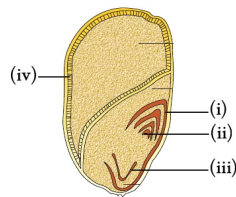


Write the names of aestivation in figures 1, 2 and 3. Identify aestivation of petals in pea flowers from the above three aestivations.

*2015 Imp.*

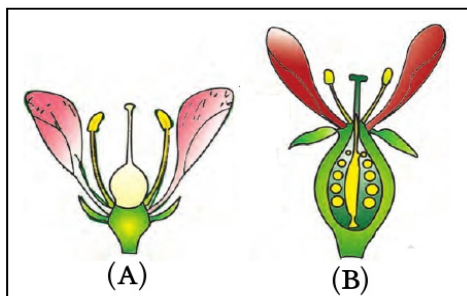
3. Identify the diagram and label the parts shown as...

- (i) .....
- (ii).....
- (iii).....
- (iv).....



*2016 Imp.*

4. Observe the diagrams given below.



Name the type of flowers A and B. Give one example of each.

*2017 Imp.*

5. Write two differences between racemose and cymose inflorescence.

*2017 Imp.*

6. Match the following:

Column A		Column B	
a)	Calotropis	i)	Vexillary
b)	China Rose	ii)	Valvate
c)	Cassia	iii)	Twisted
d)	Pea	iv)	Imbricate

*2018 March*

7. The following figures A and B shows two different types of phyllotaxy.



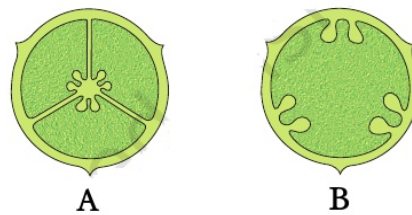
Identify the phyllotaxy A, B and explain them.

*2018 Imp.*

8. Write any two major difference between racemose and cymose inflorescence.

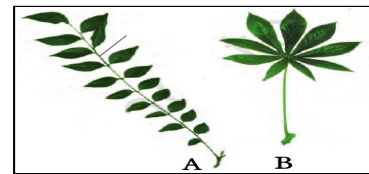
*2018 2nd term*

9. The following figures A and B shows two different types of placentation. Identify the placentation and explain.



*2019 Model*

10. Identify the type of compound leaves. Give one example for each.



*2019 1st term*

11. Root is covered at the apex by a thimble like structure. Name the structure and write its major function.

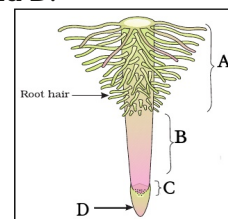
*2019 1st term*

12. Salient features of angiosperms are given below. Select the features of dicotyledons.

- a) Seeds having two Cotyledons
- b) Parallel venation in leaves
- c) Single cotyledon in seeds
- d) Reticulate venation in leaves

*2019 1st term*

13. Observe the diagram and label the parts noted as A, B, C and D.



*2020 Model*

14. Define the following terms:

- (a) Aestivation
- (b) Placentation

*2020 Imp.*

15. Phyllotaxy is the pattern of arrangement of leaves on stem of branch. Write the name of any two types of Phyllotaxy.

*2021 Model*

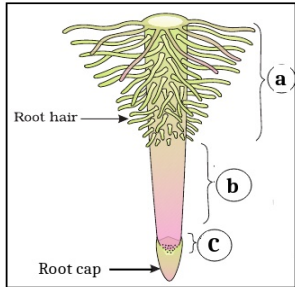
**PREVIOUS QUESTIONS XI 2012-2024 : Chapter 3 -Morphology of Flowering plants**

16. The arrangement of veins and veinlets in the lamina of leaf is termed as venation.

Write any two types of venation. 2021 Sept.

17. Differentiate between alternate and opposite phyllotaxy. 2021 Imp.

18. Observe the figure and label the parts (a), (b) and (c). Write down the functions of root hairs.



2022 Model

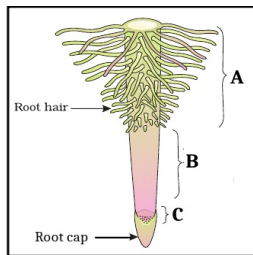
19. Write any two peculiarities of racemose inflorescence. 2022 June

20. (a) What is venation ?  
 (b) Which are the different types of venation? 2022 Imp

21. The fruit is a characteristic feature of flowering plants.

- a) Fruits of coconut and mango are called.....
- b) What are parthenocarpic fruits? 2022 2nd term

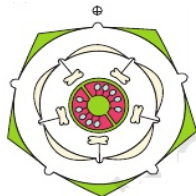
22. a) Observe the diagram and label the regions of root tip marked as A, B, C.  
 b) Write down the function of root cap.



2022 2nd term

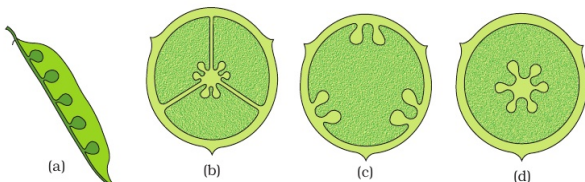
23. Floral diagram of family of an angiosperm plant is given below.

- a) Identify the family.
- b) Write any two floral character of this family.



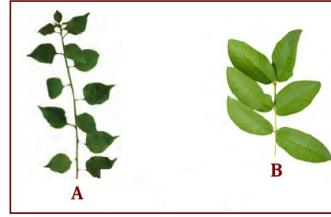
2022 2nd term

24. Observe the following diagram a, b, c, d and identify the placentation.



2023 Model

25. The following figures A & B show two different types of phyllotaxy:



2023 March

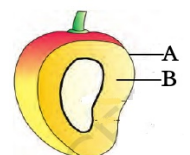
- (i) Define phyllotaxy
- (ii) Write the name of phyllotaxy A & B

26. (a) What is inflorescence ?  
 (b) Which are the two types of inflorescence ? 2023 Imp.

**2<sup>1</sup> / , Marks Questions**

1. The diagram given below shows the parts of a true fruit.

- a) Write the technical name of this fruit developed from a monocarpellary superior ovary.
- b) Label parts A and B
- c) Can you distinguish a parthenocarpic fruit from the given fruit? 2013 March



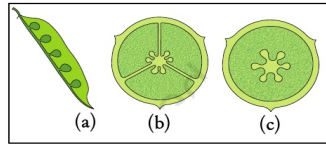


**PREVIOUS QUESTIONS XI 2012-2024 : Chapter 3 -Morphology of Flowering plants**

**3 Marks Questions**

1. The arrangement of ovules in the ovary is known as placentation. Given below are different types of placentations.

a) Identify (a), (b) and (c).



b) Briefly explain (a), (b) and (c) in one or two sentences.

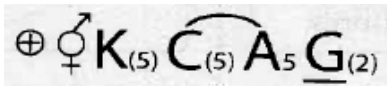
*2014 Imp.*

2. a) The arrangement of flowers on the floral axis is called.....

- i) Aestivation
- ii) Phyllotaxy
- iii) Placentation
- iv) Inflorescence

b) How can you differentiate an actinomorphic flower from a zygomorphic flower? *2017 March*

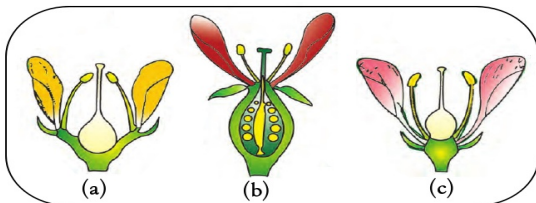
3. Observe the floral formula given below.



a. Identify the family

b. Write any three peculiarities of gynoecium. Name a plant belonging to this family. *2017 2nd term*

4. Observe the figures a, b and c. Identify the position of ovary of each flower and name the flowers accordingly.



*2017 2nd term*

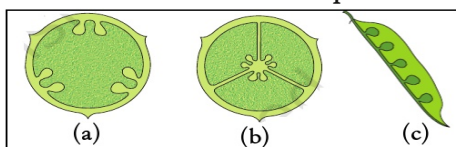
5. Observe the terms given below:

**Vexillary, Axile, Marginal, Imbricate, Basal, Valvate.**

Identify the three kinds of placentation from the above. Explain them. *2018 Model*

6. Based on the symmetry, the flowers can be classified into three types. Name and explain them. *2018 Imp.*

7. Observe the diagram. Identify the type of placentations. Give one example for each type.



*2018 2nd term*

8. Write three peculiarities of gynoecium seen in Solanaceae and Fabaceae. *2019 March*

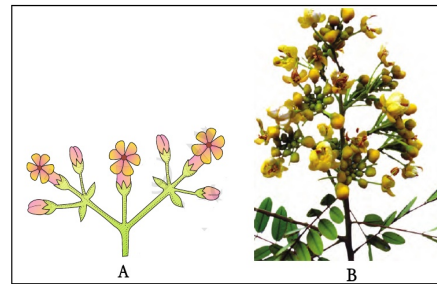
9. The pattern of arrangement of leaves on stem is called phyllotaxy.

- a) Name three types of Phyllotaxy.
- b) Give one example for each type.

*2019 1st term*

10. Observe the figures A and B

- a) Identify the type of inflorescence.
- b) Write any two difference between them.



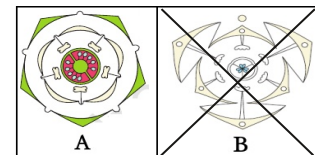
*2019 1st term*

11. A and B are floral diagrams of two angiosperm families.

(a) Identify the families of A and B.

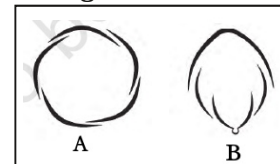
(b) Write the characters of gynoecium of A

and B.



*2020 Model*

12. Observe the figures A and B.



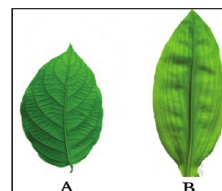
(a) Identify the aestivation A and B

(b) Write one peculiarity of A.

(c) Name the three kinds of petals in B.

*2020 March*

13. Observe the figures A and B given below.

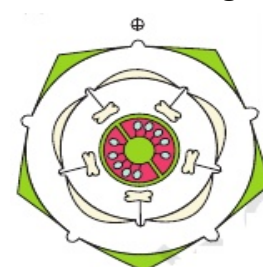


(a) Name the type of venation in A and B.

(b) Define venation.

*2020 March*

14. Observe the given floral diagram.



(a) Identify the family.

(b) Write any two floral characters of this family.

(c) Write the name of two economically important plants of this family.

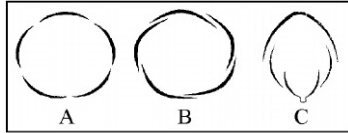
*2020 Imp.*

**PREVIOUS QUESTIONS XI 2012-2024 : Chapter 3 -Morphology of Flowering plants**

15. Flowers are classified into three types based on the position of floral parts on thalamus.

- (a) Which are they?
- (b) Write the position of ovary in each one of them. 2021 Model

16. Observe the given diagram representing three types of aestivation seen in corolla.

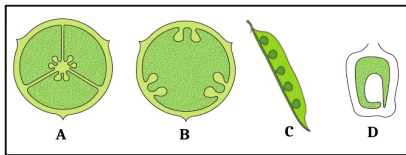


- (a) Identify the types of aestivation labelled A, B and C.
- (b) What are the peculiarities of corolla in flowers with aestivation labelled 'C'? 2021 Imp.

17. Define phyllotaxy. Explain any two types of phyllotaxy 2022 Model

18. (a) What is Placentation ?

- (b) Write the name of placentation given in the figure A, B, C and D.

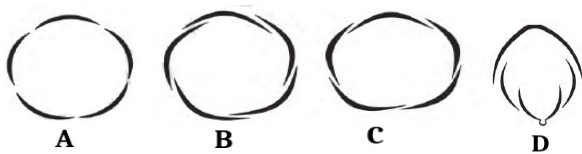


19.a) Define Inflorescence.

- b) Differentiate Racemose and Cymose inflorescence. 2022 2nd term

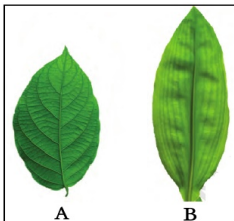
20. Observe the diagram given below.

- a) Define aestivation.
- b) Identify type of aestivation labelled as A, B, C and D



2022 2nd term

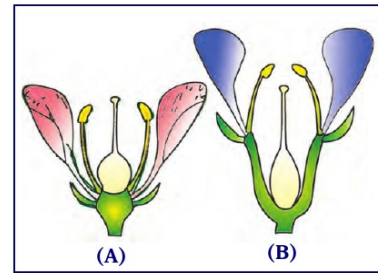
21. Observe the figure 'A' and 'B' and answer the questions.



- a) Define venation.
- b) Name and explain the type of venation in 'A' and 'B'.

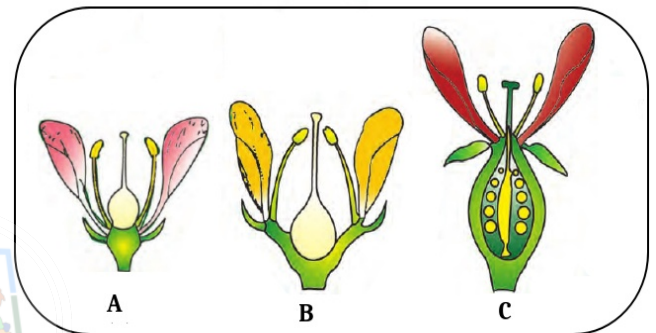
2023 Model

22. The given figure shows different types of flowers based on position of floral parts on thalamus:



- (i) Identify (A) & (B).
- (ii) Explain Epigynous flower. 2023 March

23. The figures A, B and C show different types of flowers based on the position of ovary. Write the name and position of ovary of each flower.



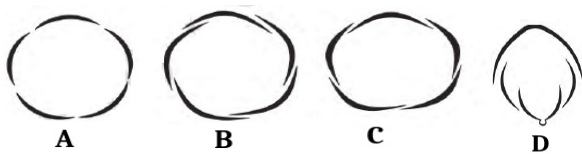
2023 Imp

19.a) Define Inflorescence.

- b) Differentiate Racemose and Cymose inflorescence. 2022 2nd term

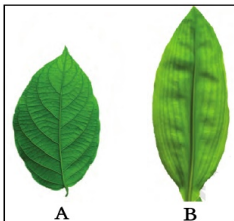
20. Observe the diagram given below.

- a) Define aestivation.
- b) Identify type of aestivation labelled as A, B, C and D



2022 2nd term

21. Observe the figure 'A' and 'B' and answer the questions.



- a) Define venation.
- b) Name and explain the type of venation in 'A' and 'B'.

2023 Model

24. Floral diagram of family of an angiosperm plant is given below.

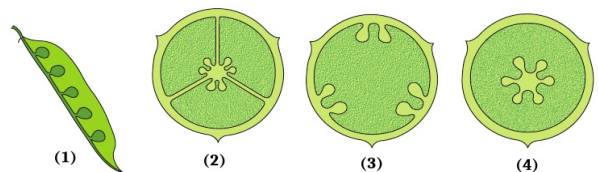
- a) Identify the family
- b) Write any floral character of this family
- c) What is the economic importance of this family?



2023 2nd term

25. Observe the given diagram and answer the questions

- a) What is placentation?
- b) Write the type of placentation observed in figures (1), (2), (3), (4) 2024 Model



## Answer key

### 1 Mark Questions

1. a. Axile      b. Parietal
2. a) Coleorhiza      b) Elaioplast
3. a) Solanaceae      b) Epipetalous
4. d) (i) and (iii)
5. Epiphyllous
6. Cymose
7. b) Venation.
8. Bisexual
9. Racemose
10. Scutellum
11. Phyllotaxy

### 2 Marks Questions

1. a) A. Valvate      B. Twisted  
b) Valvate - sepals or petals in a whorl just touch one another at the margin, without overlapping.  
Twisted - one margin of the appendage overlaps that of the next one and so on.
2. 1. Valvate    2. Twisted    3. Vexillary  
Pea flower - Vexillary
3. (i) Coleoptile    (ii) Plumule    (iii) Radicle  
(iv) Aleurone layer
4. A. Hypogynous    B. Epigynous
5. Racemose : the main axis continues to grow, the flowers are borne laterally in an acropetal succession  
Cymose : the main axis terminates in a flower, flowers are borne in a basipetal order

6.

Column A		Column B	
a)	Calotropis	ii)	Valvate
b)	China Rose	iii)	Twisted
c)	Cassia	iv)	Imbricate
d)	Pea	i)	Vexillary

7. A. Opposite - a pair of leaves arise at each node and lie opposite to each other.  
B. Whorled - more than two leaves arise at a node and form a whorl.
8. Racemose : the main axis continues to grow, the flowers are borne laterally in an acropetal succession  
Cymose : the main axis terminates in a flower, flowers are borne in a basipetal order
9. A. Axile - placenta is axial and the ovules are attached to it in a multilocular ovary.  
B. Parietal - the ovules develop on the inner wall of the ovary or on peripheral part.
10. A. Pinnately compound, Neem  
B. Palmately compound, Silk Cotton
11. Root cap - It protects the tender apex of the root as it makes its way through the soil.
12. a) Seeds having two Cotyledons  
d) Reticulate venation in leaves
13. A. Region of maturation  
B. Region of elongation  
C. Region of meristematic activity  
D. Root cap
14. (a) The mode of arrangement of sepals or petals in floral bud with respect to the other members of the same whorl is known as aestivation.  
(b) The arrangement of ovules within the ovary is known as placentation.
15. Alternate/Opposite/Whorled (**any 2**)
16. Reticulate, Parallel
17. Alternate - a single leaf arises at each node in alternate manner.  
Opposite - a pair of leaves arise at each node and lie opposite to each other.
18. a. Region of maturation  
b. Region of elongation  
c. Region of meristematic activity  
Root hairs absorb water and minerals from the soil.
19. The main axis continues to grow, the flowers are borne laterally in an acropetal succession.
20. (a) The arrangement of veins and the veinlets in the lamina of leaf is termed as venation.  
(b) Reticulate, Parallel
21. a) Drupe  
b) Fruits formed without fertilisation are called parthenocarpic fruits.
22. a) A. Region of maturation  
B. Region of elongation  
C. Region of meristematic activity



- b) Protects the tender apex of the root as it makes its way through the soil.
23. a) Solanaceae  
b) Inflorescence : Solitary, axillary or cymose  
Flower: bisexual, actinomorphic  
Calyx: sepals five, united, persistent, valvate aestivation  
Corolla: petals five, united; valvate aestivation  
Androecium: stamens five, epipetalous  
Gynoecium: bicarpellary obligately placed, syncarpous; ovary superior, bilocular, placenta swollen with many ovules, axile placentation **(any 2)**
24. a. Marginal b. Axile c. Parietal d. Free central
25. (i) The pattern of arrangement of leaves on the stem or branch.  
(ii) A. Alternate B. Opposite
26. (a) The arrangement of flowers on the floral axis.  
(b) Racemose and Cymose
2. a) iv) Inflorescence  
b) A flower that can be divided into two equal radial halves in any radial plane passing through the centre is called actinomorphic. If it can be divided into two similar halves only in one particular vertical plane, it is zygomorphic
3. a. Solanaceae  
b. bicarpellary/obligately placed/syncarpous/ovary superior/bilocular/placenta swollen with many ovules/axile placentation **(any 3)**  
tomato/brinjal/potato/chilli/belladonna/ashwagandha/tobacco/petunia **(any 1)**
4. (a) Ovary half inferior - Perigynous  
(b) Ovary inferior - Epigynous  
(c) Ovary superior - Hypogynous
5. Axile : placenta is axial and the ovules are attached to it in a multilocular ovary  
Marginal : placenta forms a ridge along the ventral suture of the ovary and the ovules are borne on this ridge  
Basal : the placenta develops at the base of ovary and a single ovule is attached to it.
6. Actinomorphic : A flower that can be divided into two equal radial halves in any radial plane passing through the centre.  
Zygomorphic : It can be divided into two similar halves only in one particular vertical plane.  
Asymmetric : It cannot be divided into two similar halves by any vertical plane passing through the centre
7. (a) Parietal - mustard/argemone **(any 1)**  
(b) Axile - china rose/tomato/lemon **(any 1)**  
(c) Marginal - pea
8. Bicarpellary/obligately placed/syncarpous/ovary superior/bilocular/placenta swollen with many ovules/axile placentation **(any 3)**
9. a) Alternate, Opposite, Whorled  
b) Alternate - china rose/mustard/sun flower **(any 1)**  
Opposite - Calotropis/guava **(any 1)**  
Whorled - Alstonia

### 2<sup>1</sup>/<sub>2</sub> Marks Questions

1. a) Drupe b) A. Epicarp B. Mesocarp  
c) This fruit is developed from a fertilised ovary. A parthenocarpic fruit is developed from ovary without fertilisation.

### 3 Marks Questions

1. a) (a) Marginal (b) Axile (c) Free central  
b) Marginal - placenta forms a ridge along the ventral suture of the ovary and the ovules are borne on this ridge  
Axile - placenta is axial and the ovules are attached to it in a multilocular ovary  
Free central - ovules are borne on central axis and septa are absent
10. a) A. Cymose B. Racemose  
b) Cymose - the main axis terminates in a flower, flowers are borne in a basipetal order.  
Racemose - the main axis continues to grow, the flowers are borne laterally in an acropetal succession.

11. (a) A. Solanaceae  
 (b) A. Bicarpellary, obligately placed, syncarpous, ovary superior, bilocular, placenta swollen with many ovules, axile placentation.
12. (a) A. Twisted B. Vexillary  
 (b) One margin of the appendage overlaps that of the next one and so on.  
 (c) Standard, Wing, Keel
13. (a) A. Reticulate B. Parallel  
 (b) The arrangement of veins and the veinlets in the lamina of leaf is termed as venation.
14. (a) Solanaceae  
 (b) Inflorescence : Solitary, axillary or cymose  
 Flower: bisexual, actinomorphic  
 Calyx: sepals five, united, persistent, valvate aestivation  
 Corolla: petals five, united; valvate aestivation  
 Androecium: stamens five, epipetalous  
 Gynoecium: bicarpellary obligately placed, syncarpous; ovary superior, bilocular, placenta swollen with many ovules, axile placentation **(any 2)**  
 (c) Tomato/brinjal/potato/chilli/belladonna/ashwagandha/tobacco/petunia **(any 2)**
15. (a) Hypogynous, Epigynous, Perigynous  
 (b) Hypogynous - Ovary superior  
 Epigynous - Ovary inferior  
 Perigynous - Ovary half inferior
16. (a) A. Valvate B. Twisted C. Vexillary  
 (b) There are five petals, the largest (standard) overlaps the two lateral petals (wings) which in turn overlap the two smallest anterior petals (keel)
17. Phyllotaxy is the pattern of arrangement of leaves on the stem or branch.  
 Alternate - a single leaf arises at each node in alternate manner/  
 Opposite - a pair of leaves arise at each node and lie opposite to each other/  
 Whorled - more than two leaves arise at a node and form a whorl. **(any 2)**
18. (a) The arrangement of ovules within the ovary is known as placentation.  
 (b) A. Axile B. Parietal C. Marginal D. Basal
19. a) The arrangement of flowers on the floral axis.  
 b) Racemose - the main axis continues to grow, the flowers are borne laterally in an acropetal succession.
- Cymose - the main axis terminates in a flower, flowers are borne in a basipetal order.
20. a) The mode of arrangement of sepals or petals in floral bud with respect to the other members of the same whorl is known as aestivation.  
 b) A. Valvate B. Twisted  
 C. Imbricate D. Vexillary
21. a) The arrangement of veins and the veinlets in the lamina of leaf is termed as venation.  
 b) A. Reticulate : veinlets form a network  
 B. Parallel : veins run parallel to each other within a lamina.
22. (i) (A) Hypogynous (B) Perigynous  
 (ii) The margin of thalamus grows upward enclosing the ovary completely and getting fused with it, the other parts of flower arise above the ovary. Hence, the ovary is said to be inferior.
23. A. Hypogynous - Ovary superior  
 B. Perigynous - Ovary half inferior  
 C. Epigynous - Ovary inferior
24. a) Solanaceae  
 b) Inflorescence : Solitary, axillary or cymose  
 Flower: bisexual, actinomorphic  
 Calyx: sepals five, united, persistent, valvate aestivation  
 Corolla: petals five, united; valvate aestivation  
 Androecium: stamens five, epipetalous  
 Gynoecium: bicarpellary obligately placed, syncarpous; ovary superior, bilocular, placenta swollen with many ovules, axile placentation **(any 1)**  
 c) Many plants belonging to this family are source of food (tomato, brinjal, potato), spice (chilli); medicine (belladonna, ashwagandha); fumigatory (tobacco); ornamentals (petunia).
25. a) The arrangement of ovules within the ovary is known as placentation.  
 b) (1) Marginal (2) Axile  
 (3) Parietal (4) Free central