CHAPTER 6

Morphology of Flowering Plants

The Root

1. The roots that originate from the base of the stem are: *(2020)*

a. Primary roots b. Prop roots
c. Lateral roots d. Fibrous roots

2. Pneumatophores occur in *(2018)*

a. Halophytes b. Free-floating hydrophytes
c. Carnivorous plants d. Submerged hydrophytes

3. Sweet potato is a modified *(2018)*

a. Stem b. Adventitious root
c. Tap root d. Rhizome

4. Root hairs develop from the region of: *(2017-Delhi)*

a. Maturation b. Elongation
c. Root cap d. Meristematic activity

5. Roots play insignificant role in absorption of water in: *(2015 Re)*

a. *Pistia* b. Pea
c. Wheat d. Sunflower

The Stem

6. In *Bougainvillea*, thorns are the modifications of: *(2017-Delhi)*

a. Stipules b. Adventitious root
c. Stem d. Leaf

7. Stems modified into flat green organs performing the functions of leaves are known as: *(2016 - I)*

a. Cladodes b. Phyllodes
c. Phylloclades d. Scales

8. Which of the following is not a stem modification? *(2016 - I)*

a. Pitcher of *Nepenthes* b. Thorns of *Citrus*
c. Tendrils of cucumber d. Flattened structures of *Opuntia*

9. An example of edible underground stem is: *(2014)*

a. Potato b. Carrot
c. Groundnut d. Sweet potato

The Leaf

10. Identify the correct set of statements: *(2022)*

A. The leaflets are modified into pointed hard thorns in *Citrus* and *Bougainvillea*
B. Axillary buds form slender and spirally coiled tendrils in cucumber and pumpkin
C. Stem is flattened and fleshy in *Opuntia* and modified to perform the function of leaves
D. *Rhizophora* shows vertically upward growing roots that help to get oxygen for respiration
E. Subaerially growing stems in grasses and strawberry help in vegetative propagation

Choose the correct answer from the options given below.

a. A, B, D and E only b. B and C only
c. A and D only d. B, C, D and E only

11. Leaves become modified into spines in: *(2015)*

a. Onion b. Silk Cotton
c. *Opuntia* d. Pea

The Flower

12. Which one of the following plants shows vexillary aestivation and diadelphous stamens? *(2022)*

a. *Solanum nigrum* b. *Colchicum autumnale*
c. *Pisum sativum* d. *Allium cepa*

13. The flowers are Zygomorphic in: *(2022)*

A. Mustard
B. Gulmohar
C. *Cassia*
D. *Datura*
E. Chilli

Choose the correct answer from the options given below.

a. C, D and E only b. A, B and C only
c. B and C only d. D and E only

14. Diadelphous stamens are found in: *(2021)*

a. Citrus b. Pea
c. China rose and citrus d. China rose

15. Ray florets have: *(2020)*
a. Superior ovary b. Hypogynous ovary
c. Half inferior ovary d. Inferior ovary

16. The ovary is half inferior in: *(2020)*
a. Mustard b. Sunflower
c. Plum d. Brinjal

17. Correct position of floral parts over thalamus in mustard plant is- *(2020-Covid)*
a. Margin of the thalamus grows upward, enclosing the ovary completely, and other parts arise below the ovary
b. Gynoecium is present in the centre and other parts cover it partially
c. Gynoecium is situated in the centre, and other parts of the flower are located at the rim of the thalamus, at the same level
d. Gynoecium occupies the highest position, while the other parts are situated below it

18. Placentation in which ovules develop on the inner wall of the ovary or in peripheral part, is *(2019)*
a. Basal b. Axile
c. Parietal d. Free central

19. Free-central placentation is found in: *(2016 - II)*
a. *Brassica* b. *Citrus*
c. *Dianthus* d. *Argemone*

20. Radial symmetry is found in the flowers of: *(2016 - II)*
a. *Pisum* b. *Cassia*
c. *Brassica* d. *Trifolium*

21. How many plants among *Indigofera*, *Sesbania*, *Salvia*, *Allium*, Aloe, mustard, groundnut, radish, gram and turnip have stamens with different lengths in their flowers? *(2016 - II)*
a. Five b. Six
c. Three d. Four

22. The term 'Polyadelphous' is related to: *(2016 - II)*
a. Corolla b. Calyx
c. Gynoecium d. Androecium

23. The standard petal of a papilionaceous corolla is also called: *(2016 - I)*
a. Carina b. Pappus
c. Vexillum d. Corona

24. Perigynous flowers are found in: *(2015)*
a. China rose b. Rose
c. Guava d. Cucumber

25. Ovary is inferior in: *(2015)*
a. *Guava* b. *Rose*
c. *China rose* d. *Peach*

26. Axile placentation is present in: *(2015 Re)*
a. Lemon b. Pea
c. *Argemone* d. *Dianthus*

27. Among china rose, mustard, brinjal, potato, onion and tulip, how many plants have superior ovary? *(2015 Re)*
a. Six b. Three
c. Four d. Five

28. When the margins of sepals or petals overlap one another without any particular direction, the condition is termed as: *(2014)*
a. Valvate b. Vexillary
c. Imbricate d. Twisted

29. Among bitter gourd, mustard, brinjal, pumpkin, china rose, *Lupin*, cucumber, sun hemp, gram, guava, bean, chili, plum, *Petunia*, tomato, rose, *Withania somnifera*, potato, onion, Aloe and tulip how many plants have hypogynous flower? *(2013)*
a. Eighteen b. Six
c. Ten d. Fifteen

30. In China rose the flowers are: *(2013)*
a. Zygomorphic, epigynous with twisted aestivation
b. Actinomorphic, hypogynous with twisted aestivation
c. Actinomorphic, epigynous with valvate aestivation
d. Zygomorphic, hypogynous with imbricate aestivation

The Fruit

31. Identify the correct features of Mango and Coconut fruits.
(i) In both fruit is a drupe
(ii) Endocarp is edible in both
(iii) Mesocarp in Coconut is fibrous, and in Mango it is fleshy
(iv) In both, fruit develops from monocarpellary ovary
Select the correct option from below: *(2020-Covid)*
a. (i), (ii) and (iii) only b. (i) and (iv) only
c. (i) and (ii) only d. (i), (iii) and (iv) only

32. Coconut fruit is a: *(2017-Delhi)*
a. Drupe b. Berry
c. Nut d. Capsule

33. The morphological nature of the edible part of coconut is: *(2017-Delhi)*
a. Perisperm b. Cotyledon
c. Endosperm d. Pericarp

34. An aggregate fruit is one which develops from: **[OS]** *(2014)*
a. Multicarpellary superior ovary
b. Multicarpellary syncarpous gynoecium
c. Multicarpellary apocarpus gynoecium
d. Complete inflorescence

35. Placenta and pericarp are both edible portions in: *(2014)*
a. Potato b. Apple
c. Banana d. Tomato

The Seed

36. Which one of the following statements is correct? *(2014)*
a. A sterile pistil is called a staminode
b. The seed in grasses is not endospermic
c. Mango is a parthenocarpic fruit
d. A proteinaceous aleurone layer is present in maize grain

37. Seed coat is not thin, membranous in: *(2013)*

a. Gram b. Maize
c. Coconut d. Groundnut

Description of Familes-Fabaceae, Solanaceae, Liliaceae

38. Match Column-I with Column-II *(2021)*

	Column-I		Column-II
A.	% ⚥ $K_{(5)} C_{1+2+(2)} A_{(9)+1} \underline{G}_1$	(i)	Brassicaceae
B.	$\oplus$ ⚥ $K_{(5)} \widehat{C_{(5)} A_5} \underline{G}_2$	(ii)	Liliaceae
C.	$\oplus$ ⚥ $\widehat{P_{(3+3)} A_{3+3}} \underline{G}_{(3)}$	(iii)	Fabaceae
D.	$\oplus$ ⚥ $K_{2+2} C_4 A_{2-4} \underline{G}_{(2)}$	(iv)	Solanaceae

Select the correct answer from the options given below.

a. A-i B-ii C-iii D-iv
b. A-ii B-iii C-iv D-i
c. A-iv B-ii C-i D-iii
d. A-iii B-iv C-ii D-i

39. Which of the following is the correct floral formula of Liliaceae? *(2020-Covid)*

a. $\oplus$ ⚥ $K_{(5)} \widehat{C_{(5)} A_5} \underline{G}_{(2)}$ b. Br $\oplus$ ⚥ $\widehat{P_{(3+3)} A_{3+3}} G_{(3)}$

c. $\oplus$ ⚥ $K_{(5)} \widehat{C_{(5)} A_5} \underline{G}_{(2)}$ d. % ⚥ $C_{1+2+(2)} A_{(9)+1} \underline{G}_{(1)}$

40. Tricarpellary, syncarpous gynoecium is found in flowers of: *(2016 - I)*

a. Liliaceae b. Solanaceae
c. Fabaceae d. Poaceae

41. Keel is the characteristic feature of flower of: *(2015)*

a. Aloe b. Tomato
c. Tulip d. *Indigofera*

Answer Key

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
d	a	b	a	a	c	c	a	a	d	c	c	c	b	d	c	d
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
c	c	c	d	d	c	b	a	a	a	c	d	b	d	a	c	c
35	36	37	38	39	40	41										
d	d	c	d	b	a	b										