



RAVI MATHS TUITION CENTRE , WHATSAPP - 8056206308

Time : 60 Mins

5 MORPHOLOGY OF FLOWERING PLANTS 1

Marks : 240

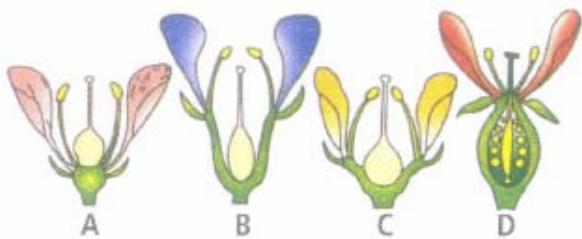
1. Placentation in pea, bean is
a) Axile b) Parietal c) Marginal d) Basal
2. In ginger vegetative propagation occurs through
a) Offsets b) bulbils c) Runners d) Rhizome
3. Epipetalous and syngenesious stamens occur in _____.
a) Solanaceae b) Brassicaceae c) Fabaceae d) Asteraceae
4. Which is not a stem modification
a) Rhizome of ginger b) Corm of Colocasia c) Pitcher of Nepenthes d) Tuber of potato
5. Plant having column of vascular tissues, bearing fruits and having a tap root system is _____.
a) Monocot b) Dicot c) Gymnosperm or dicot d) Gymnosperm or monocot
6. Find out the incorrect match.
a) Sterile stamen - Staminode b) Stamens attached to petals - Epipetalous
c) Stamens attached to perianth - Episepalous d) Free stamens - Polyandrous
7. The gynoecium consists of many free pistils in flowers of _____.
a) Aloe b) Tomato c) Papaver d) Michelia
8. In cyathium the ratio between female to male flower is
a) One:One b) One:Many c) Many:One d) Many:Many
9. Leaf tip tendrils are present in
a) Smilax b) Lathyrus c) Pisum d) Gloriosa.
10. Botanical name of pea plant is
a) Pisum sativum b) Pinus sativus c) Pyrus sativus d) Pisum sativus
11. In_(i)_type of inflorescence, main axis terminates in a flower, hence is limited in growth and flowers are borne in _{(ii)}_succession.

a)	b)	c)	d)
(i) racemose	(ii) acropetal	(i) racemose	(ii) basipetal

(i) cymose	(ii) acropetal
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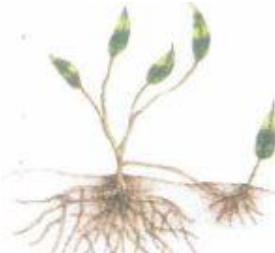
(i) cymose	(ii) basipetal
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12. Reticulate venation is a characteristic of dicots. An exception to this generalisation is
a) Ca/ophyllum b) Ficus c) Hibiscus d) Zizyphus.
13. Tetradynamous stamens and cruciform corolla are characteristic features of
a) Solanum tuberosum (Potato) b) Abelmoscus esculentus (Lady finger) c) Ochroma lagopus (Balsa)
d) Brassica campestris (Mustard)
14. Which one of the following statement is correct?
a) The seed in grasses is not endospermic b) Mango is a parthenocarpic fruit.
c) A proteinaceous aleurone layer is present in maize grain d) A sterile pistil is called a staminode

15. Based on the position of floral parts on thalamus, the flowers, are described as hypogynous, perigynous and epigynous. Which of the following floral forms (A-D) represent the flowers of Rosa and Prunus respectively?



- a) A and B b) B and C c) C and D d) B and D

16. With respect to the given figure, select the correct option.



- a) It possesses one or more nodes. b) It grows aerially for some distance and finally touches the ground.
c) It is present in *Fragaria*, *Jasminum*, etc. d) All of these

17. *Lycopersicum esculentum* (Tomato) belongs to family

- a) Solonaceae b) Malvaceae c) Cruciferae d) Cucurbitaceae

18. Read the following statements.

(i) In *Limnophila heterophylla*, the lamina of submerged leaves is very much dissected while the lamina of aerial leaves is entire. This variation in the form of lamina is referred to as _____

(ii) Potato tubers, when exposed to light, turn green due to the increased production of a glycoalkaloid named _____

(iii) In _____, ovary arises from the bottom of the cup-shaped thalamus and androperianth arises from the rim of the cup-shaped thalamus

(iv) Underground stems can be differentiated from roots by _____ of axillary buds on the nodes. Select the correct fill-ups out of the following for the above statements

a)

(i)	(ii)	(iii)	(iv)
developmental heterophyly	solanine	Rosa	presence

c)

(i)	(ii)	(iii)	(iv)
environmental heterophyly	chlorophyll	Prunus	absence

b)

(i)	(ii)	(iii)	(iv)
environmental heterophyly	solanine	Prunus	presence

d)

(i)	(ii)	(iii)	(iv)
adaptive heterophyly	lycopene	Cucurbita	absence

19. Analogous structure of phylloclade is

- a) Pitcher b) phyllode c) cladode d) Thorn

20. Root shows negative geotropism in

- a) Pothos b) Ficus c) Grass d) Rhizophora

21. Pappus is modification of

- a) Bracts b) Corolla c) Calyx d) All

22. Identify the types of inflorescence shown in the figure and select the correct option for A and B.



A	B
Cymose	Racemose

A	B
Racemose	Cymose

A	B
Racemose	Racemose

A	B
Cymose	Cymose

23. Pulses are obtained from _____.

- a) Fabaceae
- b) Asteraceae
- c) Poaceae
- d) Solanaceae

24. Which floral conditions are represented by the symbols \oplus and % respectively?

- a) Zygomorphic and actinomorphic flowers
- b) Actinomorphic and zygomorphic flowers
- c) Hypogynous and epigynous flowers
- d) Bisexual and unisexual flowers

25. The ovary is half inferior in flowers of:

- a) Guava
- b) Peach
- c) Cucumber
- d) Cotton

26. Cohesion of stamens is shown by which one of the following condition?

- a) Epiphyllous
- b) Didynamous
- c) Syngenesious
- d) Epipetalous

27. Vegetative reproduction of Agave occurs through _____.

- a) Rhizome
- b) Stolon
- c) Bulbils
- d) Sucker

28. Unbranched, erect, cylindrical stout axis with distinct nodes and internodes and with jointed appearance is called as

- a) runner
- b) Zygomorphic, hypogynous with imbricate aestivation
- c) culm
- d) caudex.

29. Water melon is

- a) Pome fruit
- b) Sorosis fruit
- c) Pepo fruit
- d) Drupe fruit

30. The mature seeds of plants such as gram and peas, possess no endosperm, because

- a) these plants are not angiosperms
- b) there is no double fertilisation in them
- c) endosperm is not formed in them
- d) endosperm gets used up by the developing embryo during seed development

31. Select the incorrect match with respect to the plant and the relative plant part modified for food storage

- a) Lathyrus odoratus (Sweet potato) - Root
- b) Solanum tuberosum (Potato) - Stem
- c) Allium cepa (Onion) - Leaves
- d) Dahlia (Dahlia) -Leaves

32. Atropa belladonna, an important medicinal plant is of the family

- a) Liliaceae
- b) Cucurbitaceae
- c) Cruciferae
- d) Solonaceae

33. Assertion : The alternate type of phyllotaxy is the arrangement of leaves in which a single leaf arises at each node in alternate manner

Reason: The alternate type of phyllotaxy is seen in China rose and mustard plant

- a) If both assertion and reason are true and reason is the correct explanation of assertion.
- b) If both assertion and reason are true but reason is not the correct explanation of assertion
- c) If assertion is true but reason is false.
- d) If both assertion and reason are false

34. Most advanced type of placentation is

- a) Marginal
- b) Axile
- c) Basel
- d) Parietal

35. Read the following statements and select the correct option.

Statement 1: The stem tubers are the swollen ends of specialised underground stem branches, which help in vegetative propagation of the plant

Statement 2: Solanum tuberosum is an example of a stem tuber which stores inulin as the main reserve food material.

- a) Both statements 1 and 2 are correct b) Statement 1 is correct but statement 2 is incorrect
- c) Statement 1 is incorrect but statement 2 is correct
- d)

Ficus benghalensis, Pissatum tuber is an oval or spherical underground swollen stem structure which does not bear adventitious roots, e.g., potato (Solanum tuberosum), Jerusalem artichoke (Helianthus tuberosus). Food reserve is starch in potato and inulin in artichokeum sativum

36. Which of the following plants is used to extract the blue dye?

- a) Trifolium b) Indigofera c) Lupin d) Cassia

37. Match column I with column II and select the correct option from the given codes

Column-I	Column-II
A Pedicel	(i) Reduced leaf
B Peduncle	(ii) Stalk of the flower
C Bract	(iii) Stalk of the leaf
D Petiole	(iv) Inflorescence axis

a) A-(ii), B-(iv), C-(i), D-(iii) b) A-(iii), B-(iv), C-(i), D-(ii) c) A-(iii), B-(ii), C-(i), D-(iv)

d) A-(ii), B-(iii), C-(i), D-(iv)

38. In Dianthus, placentation is

- a) Basal b) Free central c) Axile d) Marginal

39. X is a scar on the seed coat through which the developing seeds were attached to the fruit; above the X is a small pore called Y.

Identify X and Y and select the correct option.

a)	b)	c)	d)
X Y Micropyle Hilum	X Y Hilum Micropyle	X Y Testa Tegmen	X Y Chalaza Micropyle

40. Caryopsis fruit is found in

- a) wheat b) Pea c) Gram d) Lentil

41. Placentation of mustard plant is

- a) Parietal b) Axial c) Basal d) Marginal

42. Plants which produce characteristic pneumatophores and show vivipary belong to:

- a) Halophytes b) Psammophytes c) Hydrophytes d) Mesophytes

43. Select the pair which contains monocotyledonous families.

- a) Solanaceae and Brassicaceae b) Fabaceae and Asteraceae c) Liliaceae and Poaceae
- d) None of these

44. Select the mismatched pair out of the following

- a) Rhizome - Dryopteris, Nelumbo nucifera b) Corm - Crocus sativus, Amorphophallus
- c) Sucker - Curcuma domestica, Zingiber officinale d) Tuber - Helianthus tuberosus, Solanum tuberosum

45. Match the following

(a) Valvate	(i) Chinarose
(b) Twisted	(ii) Calotropis
(c) Imbricate	(iii) Pea
(d) Vexillary	(iv) Cassia

a) a (ii), b (i), c (iv), d (iii) b) a (ii), b (iii), c (iv), d (i) c) a (i), b (ii), c (iii), d (iv) d) a (iv), b (iii), c (ii), d (i)

46. In onion the swollen underground structure is

- a) Root b) Rhizome c) Bulb d) Tuber

47. Replum is

- a) False placenta b) False septum c) False ovule d) False thalamus

48. The given figure represents vexillary aestivation. Select the suitable labels for P, Q, and R.



a)			b)		
P	Q	R	P	Q	R
Standard	Wing	Ala	Standard	Keel	Wing

c)			d)		
P	Q	R	P	Q	R
c)			d)		
P	Q	R	P	Q	R
Wing	Keel	Carina	Standard	Ala	Carina

49. Cotyledon of maize grain is called:

- a) Scutellum b) Plumule c) Coleorrhiza d) Coleoptile

50. The coconut water and the edible part of coconut are equivalent to:

- a) Endosperm b) Endocarp c) Mesocarp d) Embryo

51. Finely dissected leaf may be an adapta

- a) xerophytes b) psammophytes c) halophytes d) hydrophytes

52. Shepherd's purse plant belongs to family

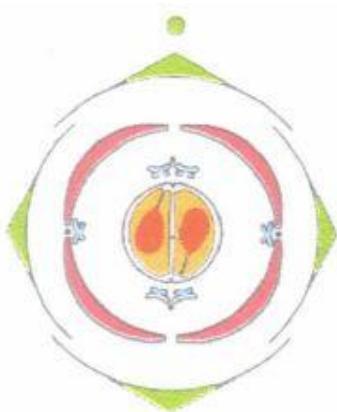
- a) Cruciferae b) Malvaceae c) Solonaceae d) Leguminosae

53. Assertion : Stems of some plants protect them from browsing animals

Reason : Axillary buds of stems of these plants are modified into thorns

- a) If both assertion and reason are true and reason is the correct explanation of assertion.
 b) If both assertion and reason are true but reason is not the correct explanation of assertion
 c) If assertion is true but reason is false. d) If both assertion and reason are false

54. Which of the following features characterise the family represented by the given floral diagram?



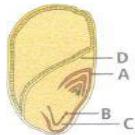
- a) Cruciform corolla with quincuncial aestivation b) Stamens with didynamous condition
 c) Bicarpellary, syncarpous ovary with parietal placentation d) Inflorescence usually cymose

55. Match column I with column II and select the correct option from the given codes.

Column I (Type of fleshy taproot)	Column II (Example)
A Conical	(i) Brassica rapa
B Fusiform	(ii) Daucus carota
C Napiform	(iii) Raphanus sativus
D Tuberous	(iv) Mirabilis jalapa

- a) A-(ii), B-(iii), C-(i), D-(iv) b) A-(iii), B-(ii), C-(i), D-(iv) c) A-(ii), B-(i), C-(iii), D-(iv)
d) A-(ii), B-(iii), C-(iv), D-(i)
56. Given figure represents longitudinal section of a monocotyledonous embryo. Identify the parts labelled as A, B, C and D from the list (i-vii) and select the correct option.

- (i) Scutellum
- (ii) Coleoptile
- (iii) Shoot apex
- (iv) Epiblast
- (v) Radicle
- (vi) Root cap
- (vii) Coleorrhiza



- | | | | |
|------------------|-----------------|--------------------|--------------------|
| a) | b) | c) | d) |
| A B C D | A B C D | A B C D | A B C D |
| (i)(vi)(vii)(ii) | (ii)(vii)(v)(i) | (iv)(iii)(vi)(vii) | (iii)(vii)(vi)(ii) |

57. Placenta swollen with many ovules is present in family
a) Solanaceae b) Brassicaceae c) Lilliaceae d) Malvaceae

58. Assertion : The floral formula of Family Solanaceae is

$$\oplus \textcircled{♀} \textcircled{♂} K_{(5)} C_{(5)} A_5 G_{(2)}$$

Reason : This floral formula of Solanaceae tells that flower is bisexual, sepals five, petals five, stamens five and gynoecium tricarpellary, trilocular with many ovules.

- a) If both assertion and reason are true and reason is the correct explanation of assertion
 - b) If both assertion and reason are true but reason is not the correct explanation of assertion
 - c) If assertion is true but reason is false d) If both assertion and reason are false
59. In Bougainvillea, weak stems rise up a support by clinging to it with the help of curved thorns, such plants are called as
a) tendrils b) hooks c) offsets d) scramblers.
60. Which of the following is an incorrect pair?
a) Phylloclade - Opuntia b) Cladode - Ruscus c) Phyllode - Asparagus d) Stem tendrils - Grapevine