Ravi Maths Tuition Centre

Time : 1 Mins **MORPHOLOGY OF FLOWERING PLANTS 1** **Marks : 1298**

1. Select the group of plants that possess stilt roots
   a) Zea mays, Rhizophora mangal
   b) Pandanus odoratissimus, Ficus benghalensis
   c) Ficus benghalensis, Pisum sativum d) Ficus benghalensis, Pisum sativum
2. Match the following

(a) Mustard	(i) Liliaceae
(b) Mulaithi	(ii) Solonaceae
(c) Ashwagandha	(iii) Fabaceae
(d) Tulip	(iv) Brassicaceae

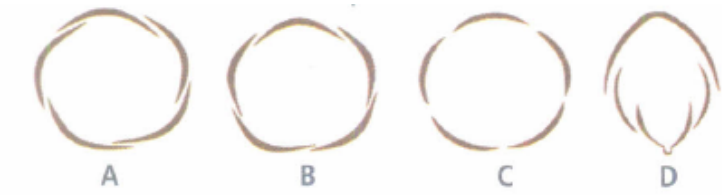
   a) a (iv), b (iii), c (ii), d (i) b) a (iv), b (iii), c (i), d (ii) c) a (iii), b (iv), c (ii), d (i)
   d) a (i), b (ii), c (iii), d (iv)
3. The type of placentation in which ovary is syncarpous, unilocular and ovules on sutures is called _____ .
   a) Apical placentation b) Parietal placentation c) Marginal placentation
   d) Superficial placentation
4. Leaf tendrils are found in:
   a) Pea b) Cucumber c) Grape vine d) All of the above
5. The swollen end of the stalk of flower is called
   a) Pedicel b) null c) Petiole d) Rachis
6. A small rootless aquatic herb in which a portion of leaf forms a tiny sack or bladder which traps water insects is
   a) Dionaea b) Utricularia c) Sarracenia d) Drosera.
7. Root shows negative geotropism in
   a) Pothos b) Ficus c) Grass d) Rhizophora
8. Which of the following is a correct combination of family and its respective members?
   a) Fabaceae - Colchicum autumnale, Trifolium alexandrinum
   b) Solanaceae - Withania somnifera, Petunia c) Liliaceae - Sesbania, Asparagus
   d) Asteraceae - Sonchus asper, Nicotiana tabacum
9. Match the following

(a) Hypogynous	(i) Lily

(b) Perigynous	(ii) Cucumber, Ray florets of sunflower
(c) Epigynous	(iii) Plum, Peach
(d) Perianth	(iv) Chinarose, Brinjal

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

10. Vivipary is _____ .
    a) Seed germination with subterranean cotyledons
    b) Seed germination with epiterranean cotyledons
    c) Fruit development without pollination
    d) Seed germination inside the fruit while attached to the plant
11. Find the correct match w.r.t plant and its family
    a) Colochicine - Lilliaceae b) Chilli - Brassicaceae c) Mulethi - Solanaceae
    d) Capsella - Fabaceae
12. Identify the different types of aestivation (A, B, C and D) and select the correct option.



    a) (a) Valvate Twisted Imbricate Vexillary b) Imbricate Twisted Valvate Vexillary
    c) Twisted Imbricate Vexillary Valvate d) Twisted Imbricate Valvate Vexillary
13. _____ inflorescence is a compact spike-like inflorescence with small unisexual flowers
    a) Spike b) Corymb c) Catkin d) Umbel
14. Proximal end of the filament of stamen is attached to the _____ .
    a) Anther b) Connective c) Placenta d) Thalamus or petal
15. 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 heterophylly	solanine	Rosa	presence

b)

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

c)

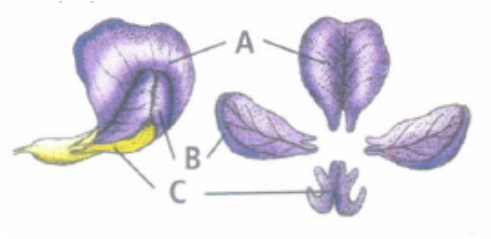
(i)	(ii)	(iii)	(iv)
environmental heterophylly	chlorophyll	Prunus	absence

d)

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

16. An example of axile placentation is:
    a) Dianthus b) Lemon c) Marigold d) Argemone
17. Parallel venation is a characteristic of monocots. Which of the following is an exception to this generalisation?
    a) Smilax b) Colocasia c) Alocasia d) All of these
18. Modified stem into green, flattened structure for assimilatory function is:
    a) Phyllode b) Phylloclade c) offset d) Thorn
19. Identify the family which shows the following diagnostic features.
    Flowers pentamerous, gynoecium-bicarpellary, syncarpous, ovary placed obliquely, placentation axile, placenta swollen.
    a) Solanaceae b) Leguminosae c) Papilionaceae d) Liliaceae
20. 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.
21. Oil reserve of groundnut is present in _____ .
    a) Embryo b) Cotyledons c) Endosperm d) Underground tubers
22. Whorled, simple leaves with reticulate venation are present in _____ .
    a) Calotropis b) Neem c) China rose d) Alstonia
23. The ovary is half inferior in flowers of:
    a) Guava b) Peach c) Cucumber d) Cotton

24. Select the correct option for A, B and C in the given diagram of papilionaceous corolla.



a)

A	B	C
Keel	Wings	Vexillum

b)

A	B	C
Vexillum	Keel	Wings

c)

A	B	C
Vexillum	Wings	Keel

d)

A	B	C
Wings	Keel	Vexillum

25. The symbol $K_{2+2}\ C_{x4}\ A_{2+4}$ represents which one of the following family?
a) Solanaceae b) Brassicaceae c) Potato family d) Lity family

26. 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

27. The arrangement of sepals of petals in Calotropis is
a) Valvate b) Twisted c) Imbricate d) Vexillary

28. Syngenesious condition of stamens is found in Family
a) Asteraceae b) Liliaceae c) Cruciferae d) Malvaceae

29. In Bougainvillea thorns are the modification of :
a) Stipules b) Adventitious root c) Stem d) Leaf

30. Plants which produce characteristic pneumatophores and show vivipary belong to:
a) Halophytes b) Psammophytes c) Hydrophytes d) Mesophytes

31. Which is not a stem modification
a) Rhizome of ginger b) Corm of Colocasia c) Pitcher of Nepenthes
d) Tuber of potato

32. Spines present on the areoles of Opuntia represent
a) stem b) leaves c) buds d) phyllodes.

33. Match the columns and choose the correct option

Column I (Fruit)	**Column II (Edible part)**
a) Walnut	I) Cotyledon
b) Cashewnut	II) Seed

Column I (Fruit)	Column II (Edible part)
c) Orange	III) Endocarp
d) Strawberry	IV) Thalamus

a) a-II, b-I, c-III, d-IV b) a-II, b-III, c-I, d-IV c) a-I, b-II, c-IV, d-III
d) a-I, b-II, c-III, d-IV

34. Regarding to androecium of given families. Match the following

(a) Brassicaceae	(i) 2+4
(b) Fabaceae	(ii) Diadelphous
(c) Solonaceae	(iii) Epipetalous
(d) Liliaceae	(iv) Six stamens in two whorl 3+3

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

35. Tetradyanamous conditions occur in
a) Cruciferae b) Malvaceae c) Solonaceae d) Liliaceae

36. Tetradynamous stamens are found in family _____ .
a) Malvaceae b) Solanaceae c) Cruciferae d) Liliaceae

37. Pappus is modification of
a) Bracts b) Corolla c) Calyx d) All

38. Cymose inflorescence is present in :
a) Solanum b) Sesbania c) Trifolium d) Brassica

39. Vivipary is characteristics of _____ .
a) Mesophytes b) Xerophytes c) Hygrophytes d) Halophytes

40. Which kind of placentation is represented by the given figure?

a) Marginal b) Axile c) Parietal d) Basal

41. Which of the following represents the edible part of the fruit Litchi
a) Endocarp b) Pericarp c) Juicy aril d) Mesocarp

42. The 'eyes' of the potato tuber represent
a) nodes b) root buds c) flower buds d) leaf buds

43. The edible part of turnip is
a) Modified Adventitious roots b) Modified tap root c) Stem
d) Underground stem

44. Placentation in tomato and lemon is :
a) Marginal b) Axile c) Parietal d) Free-central

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. A simple leaf can be differentiated from the pinnae of a compound leaf on the basis of presence or absence of :
a) number of pinnae b) shape of lamina c) axillary bud d) lateral buds

47. Stem modified into leaf like structure and leaves are changed into spines in
a) Phyllode b) Tuber c) Phylloclade d) All the above

48. The gynoecium consists of many free pistils in flowers of _____ .
a) Aloe b) Tomato c) Papaver d) Michelia

49. Assertion: In imbricate aestivation, out of five petals one is completely internal, one is completely external and in each of the remaining three petals, one margin is internal and the other is external
Reason : Ascending imbricate aestivation is found in Cassia and gulmohur
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

50. In_____ phyllotaxy, a pair of leaves arise at each node and lie opposite to each other as in _____ plant
a) alternate, Hibiscus b) opposite, Hibiscus c) opposite, Calotropis
d) whorled, Calotropis

51. 

Select the incorrect statement regarding the given figure.
a) It represents the baccate fruit of Lycopersicum esculentum.
b) It is derived from a monocarpellary apocarpous gynoecium.
c) It represents the true berry of tomato. d) Both (b) and (c)

52. In turmeric, stem is a
a) Tuber b) Bulb c) Rhizome d) Corm

53. In__(i)__type of inflorescence, main axis terminates in a flower, hence is limited in growth and flowers are borne in _(ii)__succession.

a)

(i)	(ii)
racemose	acropetal

b)

(i)	(ii)
racemose	basipetal

c)

(i)	(ii)
cymose	acropetal

d)

(i)	(ii)
cymose	basipetal

54. In_____ flowers, margin of thalamus grows upward enclosing the ovary completely and getting fused with it.
a) hypogynous b) perigynous c) epigynous d) both (b) and (c)

55. In china rose the flowers are :
a) Actinomorphic, epigynous with valvate aestivation
b) Zygomorphic, hypogynous with imbricate aestivation
c) Zygomorphic, epigynous with twisted aestivation
d) Actinomorphic, hypogynous with twisted aestivation

56. Edible part of apple and pear is
a) epicarp b) mesocarp c) mesocarp d) thalamus

57. The coconut water and the edible part of coconut are equivalent to:
a) Endosperm b) Endocarp c) Mesocarp d) Embryo

58. Cross from corolla is found in
a) Cruciferae b) Compositae c) Leguminosae d) Malvaceae

59. Which of the following represents the edible swollen portion of Allium cepa?
a) Aerial stem b) Underground stem c) Internodes d) Leaf bases

60. Marginal placentation is generally found in Family
a) Leguminosae b) Cucurbitaceae c) Malvaceae d) Brassicaceae.

61. Nicotiana, petunia belong to
a) Malvaceae b) Liliaceae c) Solonaceae d) Cruciferae

62. Which part of the coconut produces coir?
a) Seed coat b) Mesocarp c) Epicarp d) Pericarp

63. Replum is present in the ovary of flower of _____ .
a) Lemon b) Mustard c) Sunflower d) Pea

64. Water melon is
a) Pome fruit b) Sorosis fruit c) Pepo fruit d) Drupe fruit

65. In albuminous seeds, food is stored in_____ and in exalbuminous seeds, food is stored in _____
a) endosperm, cotyledons b) cotyledons, cotyledons c) cotyledons, endosperm
d) endosperm, endosperm

66. Perigynous flowers are found in :
a) Rose b) Guava c) Cucumber d) China rose

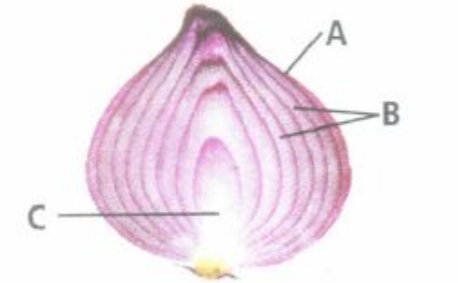
67. Standard (Vexilum) in Papilionatae (Fabaceae) is
    a) Posterior outer most b) Posterior inner most c) Anterior outer most
    d) Anterior inner most

68. Among China rose, Mustard, Brinjal, Potato, Guava, Cucurbita, Onion and Tulip, how many plants have superior ovary?
    a) Five b) Six c) Three d) Four

69. Read the given statements and select the correct option
    Statement 1: Root cap protects the root meristem from the friction of the soil and its outer cells are continuously replaced by newer ones.
    Statement 2: The effect of the soil-friction damages the outer cells of root cap which are peeled off and replaced by new cells produced by root meristem
    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) Hydrophytes

70. Seed coat is not thin, membranous in :
    a) Coconut b) Groundnut c) Gram d) Maize

71. The given figure represents the V.S. of bulb of Allium cepa. Identify the different parts and select the correct option



a)

A	B	C
Fleshy scales	Tunic	Terminal bud

b)

A	B	C
Tunic	Terminal bud	Fleshy scales

c)

A	B	C
Tunic	Fleshy scales	Terminal bud

d)

A	B	C
Terminal bud	Fleshy scales	Tunic

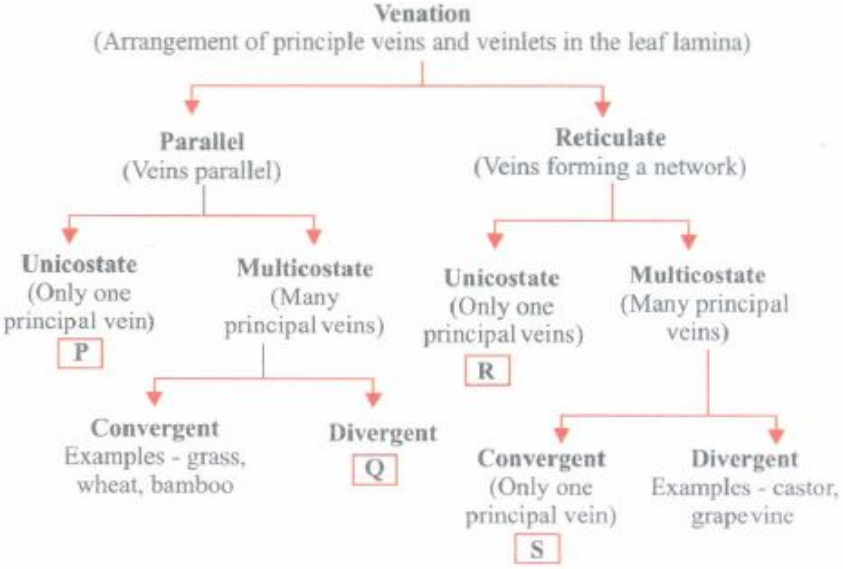
72. Which one of the following statement is correct?
    a) The seed in grasses is not endospermic b) Mango is a parthenocarpic fruit.
    c) A proteinaceous aleurone layer is present in maize grain
    d) A sterile pistil is called a staminode

73. Shepherd's purse plant belongs to family
    a) Cruciferae b) Malvaceae c) Solonaceae d) Leguminosae

74. Which of the following represents the functions of veins in the leaves?
    a) Transport of water and minerals b) Mechanical support
    c) Transport of organic food material d) All of these
75. Sweet potato is a modified:
    a) Stem b) Rhizome c) Tap root d) Adventitious root
76. In which of the following fruits the edible part is the aril?
    a) Custard apple b) Pomegranate c) Orange d) Litchi
77. The plant, which bears clinging roots, is _____ .
    a) Trapa b) Orchid c) Screw pine d) Podostemon
78. Keel is the characteristic feature of flower of :
    a) Tomato b) Tulip c) Indigofera d) ALoe
79. Pineapple (ananas) fruit develops from _____ .
    a) A multipistillate syncarpous flower
    b) A cluster of compactly borne flowers on a common axis
    c) A multiloiular monocarpellary flower d) A unilocular polycarpellary flower
80. Which of the following plants is used to extract the blue dye?
    a) Trifolium b) Indigofera c) Lupin d) Cassia
81. Roots developed from parts of the plant other than radicle are called
    a) tap roots b) fibrous roots c) adventitious roots d) nodular roots
82. What type of placentation is seen in sweet pea?
    a) Axile b) Free central c) Marginal d) Basal
83. Edible roots are found in
    a) rice b) wheat c) potato d) sweet potato
84. Finely dissected leaf may be an adapta
    a) xerophytes b) psammophytes c) halophytes d) hydrophytes
85. Monocotyledonous seeds possess a single cotyledon which is represented by
    a) scutellum b) aleurone c) tegmen d) endosperm
86. In onion the swollen underground structure is
    a) Root b) Rhizome c) Bulb d) Tuber
87. Select the pair which contains monocotyledonous families.
    a) Solanaceae and Brassicaceae b) Fabaceae and Asteraceae
    c) Liliaceae and Poaceae d) None of these
88. Among bitter gourd, mustard, brinjal, pumpkin, china rose, lupin, cucumber, sunhemp, gram, guava, bean, chilli, plum, petunia, tomato, rose, withania, potato, onion, aloe and tulip how many plants have hypogynous flower?
    a) Ten b) Fifteen c) Eigtheen d) Six
89. Axile placentation is present in _____ .

a) Lemon b) Peas c) Argemone d) Dianthus

90. A distinct monocot character shown by the flowers of Liliaceae is
    a) Hypogynous flowers b) Actinomorphic flowers c) Trimerous flowers
    d) Bisexual flowers
91. In an inflorescence where flowers are borne laterally in an acropetal succession, the position of the youngest floral bud shall be
    a) proximal b) distal c) intercalary d) anywhere.
92. _____In aestivation, sepals or petals in a whorl just touch one another at the margins, without overlapping, as is found in_____
    a) valvate, Calotropis b) valvate, Hibiscus c) twisted, Calotropis
    d) twisted, Hibiscus
93. Verticillaster inflorescence occurs in
    a) Solonaceae b) Solonaceae c) Fabaceae d) Fabaceae
94. Many pulses of daily use belong to one of the families below (tick the correct answer).
    a) Solanaceae b) Fabaceae c) Liliaceae d) Poceae
95. The coconut water from tender coconut represents _____ .
    a) endocarp b) fleshy mesocarp c) free nuclear proembryo
    d) free nuclear endosperm
96. Ovary is said to be half inferior in which of the following conditions?
    a) Hypogynous b) Perigynous c) Epigynous d) Both (b) and (c)
97. Ovary is one-chambered but it becomes two-chambered due to the formation of false septum in
    a) Brassica b) Pisum c) Hibiscus d) Dianthus.
98. Lycopersicum esculentum (Tomato) belongs to family
    a) Solonaceae b) Malvaceae c) Cruciferae d) Cucurbitaceae
99. Study the following flow chart and select the correct option for P, Q, R and S.



a)

P	Q	R	S
Banana, Canna	Fan palm	Mango, Peepal	Smilax,Zizyphus

b)

P	Q	R	S
Banana, Canna	Smilax,Zizyphus	Mango, Peepal	Fan palm

c)

P	Q	R	S
Mango, Peepal	Banana,Canna	Fan palm	Smilax,Zizyphus

d)

P	Q	R	S
Mango, Peepal	Fan palm	Smilax,Zizyphus	Banana,Canna

100. Ovary is half-interior in the flower of
a) Apple b) Guava c) Peach d) Garlic

101. If the gynoecium is present in the topmost position of the thalamus, then the flower is referred to as
a) hypogynous b) perigynous c) epigynous d) none of these.

102. pulvinus lef base is the feature of
a) Mimosa b) glorisa c) Solanum d) Banana

103. Analogous structure of phylloclade is
a) Pitcher b) phyllode c) cladode d) Thorn

104. Assertion: The placentation in which the placenta forms a ridge along the ventral suture of ovary and ovules are borne on this ridge forming two rows is called parietal placentation.
Reason: The marginal placentation has ovules developed on the inner wall of the ovary or on peripheral part
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

105. The term polyadelphous is related to :
a) Calyx b) Gynoecium c) Androeciurn d) Corolla

106. A plant has a butterfly shaped flower with one standard, two wing like and two keel petals. The plant belongs to the Family
a) Papilionaceae b) Asteraceae c) Malvaceae d) Rubiaceae.

107. How many plants in the list given below have composite fruits that develop from an inflorescence Walnut, poppy, radish, fig, pineapple, apple, tomato, mulberry _____ .
a) Four b) Five c) Two d) Three

108. Edible part of potato is
a) Inflorescence b) Leaves c) Roots d) Stem

109. The roots that originate from the base of the stem are:
a) Prop roots b) Lateral roots c) Fibrous roots d) Primary roots

110. Which floral conditions are represented by the symbols ⊕ and % respectively?
a) Zygomorphic and actinomorphic flowers
b) Actinomorphic and zygomorphic flowers c) Hypogynous and epigynous flowers
d) Bisexual and unisexual flowers

111. The standard petal of a papilionaceous corolla is also called _____ .
a) Carina b) Pappus c) Vexillum d) Corona

112. The term "Keel" is used for special type of
a) Sepals b) Petals c) Stamens d) Carpels

113. Free-central placentation is found in :
a) Dianthus b) Argemone c) Brassica d) Citrus

114. Pneumatophores occur in :
a) Carnivorous plants b) Free-floating hydrophytes c) Halophy.tes
d) Submerged hydrophytes

115. Radish is an example of
a) Fusiform root b) Napiform root c) Conical root d) Tuberous root

116. Which of the following plants possesses culm?
a) Cuscuta b) Zingiber c) Bamboo d) Cocos

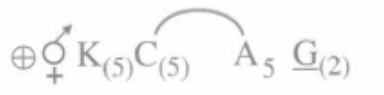
117. Select the incorrect statement out of the following.
a) Assimilatory roots capable of photosynthesis are present in Tinospora and Trapa
b)
Haustoria of Cuscuta make connections with both xylem and phoem tissues of host
c) Reproductive roots of Ipomoea batata help in vegetative propagation.
d) Epiphytic roots of Vanda possess well developed root caps and root hair.

118. Study carefully the given floral diagram and select the option which correctly represents the related floral formula.

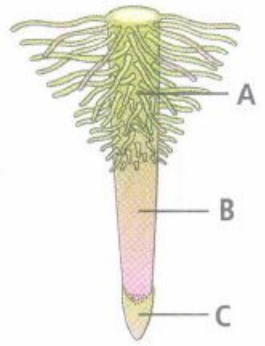
(A) (B) (C)

a)  b)  c) 

(D)

d) 

119. Which of the following statements is correct with respect to the given figure showing different zones of a typical root?



a) Part B mainly helps in absorption of water.
b) Quiescent centre is present in part B.
c) Part A is most suitable for anatomical studies of root.
d) Differentiation of cells can be observed in part C.

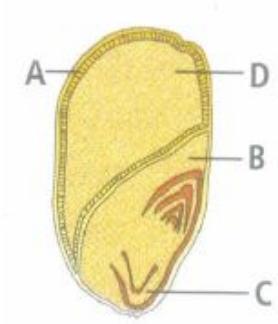
120. Cohesion of stamens is shown by which one of the following condition?
a) Epiphyllous b) Didynamous c) Syngenesious d) Epipetalous

121. Phylloclade is found in
a) Opuntia b) Cactus c) Acacia d) Both (1) & (2)

122. Assertion: Leaves of monocot plants generally possess reticulate venation
Reason: Leaves of dicot plants generally possess parallel venation
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

123. Which of the following plants bears moniliform roots?
a) Momordica b) Curcuma c) Dahlia d) Asparagus

124. In the given figure of maize grain certain regions are labelled as A, B, C and D. Match them with the codes (1, 2, 3 and 4) given below and select the correct option.



(1) The main nutritive tissue
(2) Shield shaped cotyledon
(3) Protection sheath of radicle
(4) The proteinaceous layer

a) A-(I), B-(3), C-(4), D-(2) b) A-(2), B-(3), C-(1), D-(4)
c) A-(I), B-(2), C-(3), D-(4) d) A-(4), B-(2), C-(3), D-(I)

125. Given are some differences between an underground stem and a root. Select the option that identifies the incorrect pair of differences

Underground stem	Root
It is differentiated into nodes and internodes.	It is not differentiated into nodes and internodes.
Scale leaves are present at the nodes.	Scale leaves are absent in roots.
Axillary buds are present in the axil of scale leaves.	Axillary buds are present at root tips
Branches arise exogenously.	Branches arise endogenously.
Flowers and fruits are usually present.	Flowers and fruits are absent.
These usually perform the function of food storage.	These always perform the function of food storage.

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

126. When the margins of sepals or petals overlap one another without any particular direction the condition is termed as:

a) Imbricate b) Twisted c) Valvate d) Vexillary

127. Which one of the following is a time fruit?

a) Apple b) Pear c) Cashewnut d) Coconut

128. In unilocular ovary with a single ovule the placentation is:

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

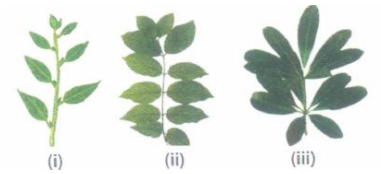
129. The primary growth in root is due to
a) Zone of maturation b) Zone of cell division c) Zone of cell elongation
d) Meristematic region

130. Fruit of groundnut is _____ .
a) Legume b) Caryopsis c) Berry d) Nut

131. Epipetalous and syngenesious stamens occur in _____ .
a) Solanaceae b) Brassicaceae c) Fabaceae d) Asteraceae

132. What would be the number of chromosomes of the aleurone cells of a plant with 42 chromosomes in its root tip cells?
a) 42 b) 63 c) 84 d) 21

133. Study the given figures and identify the kind of phyllotaxy.



a)

(i)	(ii)	(iii)
Whorled	Opposite	Alternate

b)

(i)	(ii)	(iii)
Alternate	Opposite	Whorled

c)

(i)	(ii)	(iii)
Opposite	Alternate	Whorled

d)

(i)	(ii)	(iii)
Opposite	Whorled	Alternate

134. Identify the group of plants possessing leaf tendrils:
a) Pea, Glory lily b) Cucumber, Pumpkin c) Watermelon, Grapevine
d) All of these

135. Assertion: In some flowers like lily, perianth is a term used when calyx and corolla are not distinct.
Reason: Calyx and corolla are the reproductive organs
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

136. A perennial plant differs from biennial in _____ .
a) Having underground perennating structure
b) Having asexual reproductive structures c) Being tree species
d) Not dying after seasonal production of flowers

137. Flower with radical symmetry is

a) Cassia b) Datura c) Pea d) Canna

138. Velamen is found in _____ .
a) Roots of screwpine b) Aerial and terrestrial roots of orchids
c) Leaves of Ficus elastica d) Aerial roots of orchids

139. Phyllode is present in:
a) Australian Acacia b) Opuntia c) Asparagus d) Euphorbia

140. 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

141. When adventitious roots are shallow surface feeders then they are known as
a) Tuberous root b) Prop root c) Fibrous root d) Conial root

142. The drug 'Belladona' is obtained from
a) Atropa b) Rauwolfia c) Solanum d) Capsicum

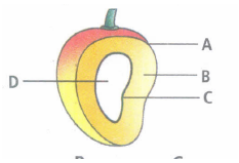
143. Juicy hair-like structures observed in the lemon fruit develop from
a) Exocarp b) Mesocarp c) Endocarp d) Mesocarp and endocarp

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

	Column I		Column II
(A)	Vegetative buds	(i)	Buds develop in axlls of leaves
(B)	Floral buds	(ii)	Buds produce leafy shoots
(C)	Axillary buds	(iii)	Reproductive buds that produce flowers
(D)	Accessory buds	(iv)	Additional buds borne at leaf bases

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

145. Given figure represents a drupe of mango. Select the option that correctly identifies A, B, C and D.



a)

A	B	C	D
Pericarp	Epicarp	Mesocarp	Endocarp

b)

A	B	C	D
Epicarp	Mesocarp	Endocarp	Seed

c)

A	B	C	D
Mesocarp	Epicarp	Endocarp	Seed

d)

A	B	C	D
Epicarp	Mesocarp	Seed	Endocarp

146. Assertion: The outermost covering of a dicotyledonous seed is the seed coat
Reason : The seed coat has two layers-outer testa and inner hilum.
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

147. Mango juice is got from _____ .
a) Epicarp b) Mesocarp c) Endocarp d) Pericarp and thalamus

148. Epygynous flowers are present in
a) Mustard b) Brinjal c) China rose d) Cucumber

149. Assertion: G is the symbol for inferior ovary
Reason: Adhesion is indicated by enclosing the figure within bracket.
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

150. Smilax and Gloriosa belong to
a) Liliaceae b) Solonaceae c) Leguminosae d) Cruciferae

151. 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)

X	Y
Micropyle	Hilum

b)

X	Y
Hilum	Micropyle

c)

X	Y
Testa	Tegmen

d)

X	Y
Chalaza	Micropyle

152. Maize grain is a fruit known as
a) cypsela b) Caryopsis c) legume d) achene

153. Which of the following is false fruit?
a) Pome b) Pepo c) Hesperidium d) Drupe

154. Assertion: In some leguminous plants, the leaf base is swollen.
Reason: The swollen leaf base is called pulvinus.
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

155. Diadelphous condition is common in
a) Malvaceae b) Cruciferae c) Liliaceae d) Fabaceae

156. Monothecous condition of stamens, i.e., presence of a single anther lobe is a characteristic of Family:
a) Cucurbitaceae b) Malvaceae c) Asteraceae d) Brassicaceae.

157. Which one of the following pairs is wrongly matched while the remaining three are correct?
a) Agave-Bulbils b) Grass-Runner c) Water hyacinth-Runner
d) Bryophyllum-Leaf buds

158. Leaf tip tendrils are present in
a) Smilax b) Lathyrus c) Pisum d) Gloriosa.

159. Rhizome of ginger is a modification of stem because
a) It bears Adventitious roots b) It bears nodes and internodes
c) It is underground d) It stores food material

160. Which of the following plant parts in garlic and onion are edible?
a) Underground stem b) Fleshy scale leaves c) Tunic d) Adventitious roots

161. The type of placentation present in Dianthus is also present in
a) Primose b) Mustard c) China rose d) Marigold

162. Which of the following kinds of venation is present in banana?
a) Reticulate unicostate b) Reticulate multicostate c) Parallel unicostate
d) Parallel multicostate

163. Presence of tetradynamous condition and false septum i.e replum are the features of family
a) Solanaceae b) Brassicaceae c) Liliaceae d) Fabaceae

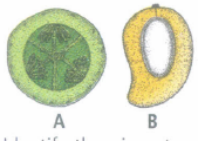
164. Angiosperm to which the largest flowers belong is _____ .
a) Total stem parasite b) Partial stem parasite c) Total root parasite
d) Partial root parasite

165. The 'eyes' of the potato tuber represent:
a) nodes b) root buds c) flower buds d) leaf buds.

166. Basal placentation occurs in
a) Poaceae b) Solonaceae c) Malvaceae d) Liliaceae

167. Roots of which plant contains an oxidising agent?
a) Carrot b) Soyabean c) Mustard d) Radish

168. Placentation in pea, bean is
a) Axile b) Parietal c) Marginal d) Basal

169. 

Identify the given types of fruit and select the correct option.
a) A = Pepo, B = Nut b) A = Pepo, B = Drupe c) A = Balausta, B = Drupe
d) A = Drupe, B = Pepo

170. Leaves become modified into spines in :
a) Silk cotton b) Opuntia c) Pea d) Onion

171. The placenta is attached to the developing seed near the
a) testa b) hilum c) micropyle d) chalaza.

172. 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

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

	column I		column-II
A	Thorns	(i)	Vegetative propagation
B	Phylloclades	(ii)	Defensive mechanism
C	Runners	(iii)	Mechanical support
D	Stilt roots	(iv)	Absorption of nutrition
E	Haustoria	(v)	Photosynthesis

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

174. Coconut water from a tender coconut is _____ .
a) Free nuclear endosperm b) Innermost layers of the seed coar
c) Degenerated nucellus d) Immature emryo

175. Which one of the following organisms is correctly matched with its three characteristics?

a) Pea: C_3 pathway, Endospermic seed, Vexillary aestivation

b) Tomato: Twisted aestivation, Axile placentation, Berry

c) Onion: Bulb, Imbricate aestivation, Axile placentation

d) Maize: C_3 pathway, Closedvascularbundles, Scutellum

176. Most advanced type of placentation is

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

177. Match the following

(a) Parietal	(i) Dianthus
(b) Axile	(ii) Sunflower
(c) Free central	(iii) Mustard
(d) Basal	(iv) China rose

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

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

178. Following table summarises the comparisons between phylloclades and cladodes (cladophylls).

	Phylloclade	Cladode
(i)	Both main stem and branches are modified to function like leaves	Only the branches are modified to take over the function of leaves
(ii)	Phylloclade has limited or definite growth	Cladode has unlimited or indefinite growth
(iii)	It consists of several nodes and internodes	It is usually one internode long
(iv)	True leaves are commonly caducous	True leaves are either reduced to scales or modified to spines
(v)	Examples: Ruscus aculeatus, Asparagus, etc	Examples: Opuntia, Euphorbiaroyleana, etc.

Pick up the wrong differences and select the correct option

a) (i) and (ii) b) (ii) and (v) c) (ill) and (v) d) (ii) and (iv)

179. Which one of the following fruits is parthenocarpic?

a) Banana b) Brinjal c) Apple d) Jackfruit

180. Which of the following is not an example of corm?

a) Colocasia b) Freesia c) Crocus d) Zingiber

181. Geocarpic fruit is

a) Carrot b) Radish c) Ground nut d) Turnip

182. Replum is

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

183. Heterospory and seed habit are often discussed in felation to a structure called _____ .

a) Spathe b) Bract c) Petiole d) Ligule

184. Tricarpellary syncarpous gynoecium is found in flowers of:

a) Liliaceae b) Solonaceae c) Fabaceae d) Poaceae

185. Assertion: Monoadelphous stamens are found in pea

Reason: In pea, stamens are united into one bunch or one bundle.

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

186. 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)

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

	Column-I (Members of Fabaceae)		Column II (Economic importance)
A	Gram, sem, moong,soybean	(i)	Timber
B	Soybean, groundnut	(ii)	Medicine
C	Indigofera	(iii)	Fodder
D	Sunhemp	(iv)	Fibres
E	Sesbania, Trifolium	(v)	Dye
F	Dalbergia sissoo	(vi)	Edible oil
G	Glycyrrhiza glabra	(vii)	Pulses

a) A-(i), B-(ii), C-(iii), D-(iv), E-(v). F-(vi), G-(vii)

b) A-(vii), B-(vi), C-(v), D-(iv), E-(iii), F-(i), G-(ii)

c) A-(ii), B-(iv), C-(vi), D-(i), E-(iii), F-(v), G- (vii)

d) A-(i), B-(iii), C-(v), D-(vii), E-(ii), F-(iv), G-(vi)

188. Match Column - I with Column - II and select the correct option using the codes given below

	Column - I		Column - II
a.	Pistills fused together	(i)	Gametonesis
b.	Formation of gametes	(ii)	Pistillate
c.	Hyphae of higher Ascomycetes	(iii)	Syncarpous
d.	Unisexual female flower	(iv)	Dikaryotic

a)

A	B	C	D
(iv)	(ii)	(i)	(ii)

b)

A	B	C	D
(ii)	(i)	(iv)	(iii)

c)

A	B	C	D
(i)	(ii)	(iv)	(iii)

d)

A	B	C	D
(iii)	(i)	(iv)	(ii)

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

190. 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

191. Caryopsis fruit is found in
a) wheat b) Pea c) Gram d) Lentil

192. Which one of the flowing statements is correct ?
a) Flower of tulip is a modified shoot b) In tomato, fruit is a capsule
c) Seeds of orchids have oil-rich endosperm d) Placentation in Primrose is basal

193. Consider the following statements.
(i) In Gynandropsis, Passiflora, etc., thalamus is elongated and shows well developed nodes and internodes
(ii) The floral buds in Agave, Allium, etc., may sometimes get modified into vegetative buds or bulbils.
(iii) Sepals are concerned with protection of flowers in bud condition and petals help to attract insects for pollination.
(iv) Stamens and carpels serve as the male and female reproductive organs respectively.
Which of the following combinations of above statements provides an evidence that flower is a modified shoot?
a) (i) and (ii) b) (ii) and (iii) c) (iii) and (iv) d) (i) and (iv)

194. Floral formula of tomato/tobacco is _____ .

a) $\oplus \underline{Q}^{\pi} \mathrm{K}_{4-5}\ \mathrm{A}_{10} \mathrm{G}_{(2)}$ b) $\oplus O^{\lambda} \mathrm{K}_{2+2} \mathrm{C}_4\ \mathrm{A}_{2+4} \mathrm{G}_1$ c) $\oplus \hat{q}^{\lambda} \mathrm{P}_2\ \mathrm{A}_3 \mathrm{G}_1$

d) $\mathrm{Br} \oplus \overset{\pi}{q}\ \mathrm{K}_{(5)} \mathrm{C}_{(5)} \mathrm{A}_{(5)} \mathrm{G}_{(2)}$

195. The floral formula $\oplus\ ♂♀\ \mathrm{K}_{(5)}\ \overset{\frown}{\mathrm{C}_{(5)}}\ \mathrm{A}_5\ \underline{\mathrm{G}}_{(2)}$ belongs to the Family

a) Fabaceae b) Asteraceae c) Solanaceae d) Liliaceae.

196. Bicarpellary gynoecium and oblique ovary occures in _____ .

a) Mustard b) Banana c) Pisum d) Brinjal

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

a)

A	B
Cymose	Racemose

b)

A	B
Racemose	Cymose

c)

A	B
Racemose	Racemose

d)

A	B
Cymose	Cymos

198. Hypanthodium is _____ .

a) Thalamus b) Fruit c) Inflorescence d) Ovary

199. Assertion: Fibrous root system consists of large number of fine, fibrous roots developing from the base of the stem

Reason: Fibrous root system is found in dicots only

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

200. Placentation of mustard plant is

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

201. In a floral formula, actinmorphic nature of flower is represented by

a) A b) / c) % d) $\bigoplus$

202. Parkinsonia is a good example of

a) phylloclade b) parachute mechanism c) phyllode d) winged fruits.

203. Biological name of wheat is

a) Triticum aestivum b) Triticum triticale c) Triticum sativum

d) Triticum sativum

204. Arrangement of flower on floral axis is termed as

a) Phyllotaxy b) Venation c) inflorescence d) inflorescence

205. Rearrange the following zones as seen in the root in vertical section and choose the correct option

A. Root hair zone

B. Zone of meristems

C. Root cap zone

D. Zone of maturation

E. Zone of elongation

a) C, B, E, A, D b) A, B, C, D, E c) D, E, A, C, B d) E, D, C, B, A

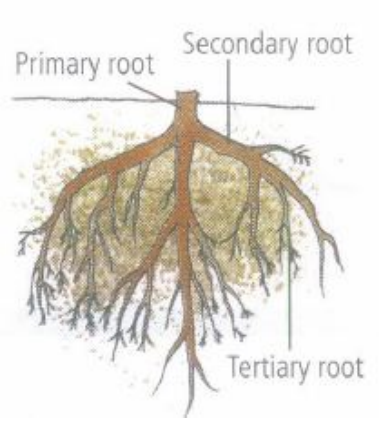
206. The most advanced type of Inflorescence is

a) Corymb b) Capitulum c) Spadix d) Catkin

207. Spathe is present in the flowers of

a) Banana b) Rice c) Marigold d) Sunflower

208. Refer to the given figure and select the incorrect statement regarding this.



a) Lateral roots arising from the main root are exogenous in origin.

b) Rootlets are the ultimate root branches that bear root hair for absorption.

c) Secondary and tertiary roots are borne in acropetal succession.

d) This type of root. system develops from radicle of embryo.

209. In cyathium the ratio between female to male flower is

a) One:One b) One:Many c) Many:One d) Many:Many

210. Cotyledon of maize grain is called:

a) Scutellum b) Plumule c) Coleorhiza d) Coleoptile

211. 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

212. Pulses are obtained from _____ .
a) Fabaceae b) Asteraceae c) Poaceae d) Solanaceae

213. Select the mismatched pair
a) Taproot system - Dicots b) Fibrous root system - Monocots
c) Fasciculated roots - Curcuma d) Stilt roots - Sugarcane

214. Ray florets have:
a) Hypogynous ovary b) Half inferior ovary c) Inferior ovary d) Superior ovary

215. Placenta and pericarp are both edible portions in:
a) Apple b) Banana c) Tomato d) potato

216. Match the column I to column II

Column I	**Column II**
(A) Mango	(i) Cotyledons & peduncle
(B) Strawberry	(ii) Mesocarp
(C) Cashew nut	(iii) Endosperm
(D) Coconut	(iv) Thalamus

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

217. 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

218. The wheat grain has an embryo with one, large, shield-shaped cotyledon known as:
a) Coleorrhiza b) Scutellum c) Coleoptile d) Epiblast

219. In a cereal grain the single cotyledon of embryo is represented by _____ .
a) scutellum b) prophyll c) coleoptile d) coleorhiza

220. Which of the following is a flowering plant with nodules containing filamentous nitrogen-fixing micro-organism _____.
a) Crotalaria juncea b) Cycas revoluta c) Cicer arietinum
d) Casuarina equisetifolia

221. Marginal Placentation and diadelphous condition are found in the family
a) Fabaceae b) Brassicaceae c) Liliaceae d) Solanaceae

222. In Opuntia, the function of photosynthesis is carried out by
a) cladode b) phyllode c) phylloclade d) stipules.

223. Siliqua is the fruit of
a) Cruciferae b) Malvaceae c) Liliaceae d) Solonaceae

224. Coconut fruit is a:
a) Berry b) Nut c) Capsule d) Drupe

225. Find the odd one w.r.t stem tendril

a) Grapevines b) Cucumber c) Pea d) Pumpkin

226. Flowers are unisexual in :

a) Onion b) Pea c) Cucumber d) China rose

227. Roots are modified to perform specific functions other than their normal functions. The given figure shows modification of the roots of mangrove plant. Select the incorrect option regarding it.

a) The stilt roots of red mangrove help in breathing.

b) The root system is highly entangled, huge and extensive under the water

c)

A large number of animals such as small fishes, crustaceans, sea horses, etc., find shelter in this root system.

d)

Besides providing mechanical support, these roots also perform photosynthetic functions in the plant.

228. Match the followings and choose correct option.

	Group-I		Group-II
A	Aleurone layer	(i)	Without fertilisation
B	Parthenocarpic fruit	(ii)	Nutrition
C	Ovule	(iii)	Double fertilisation
D	Endosperm	(iv)	Seed

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

229. Identify the missing words (A, B, C and D) and select the correct option.

Family	Inflorescence	Flower	Stamens/tepals	Gynoecium
Fabaceae	A	B	C	D
Solanaceae	Solitary, axillary or cymose	Actinomorphic	5	Bicarpellary
Lilliaceae	Solitary, cymose or racemose	Actinomorphic	C	Tricarpellary

a)

A	B	C	D
Racemose	Zygomorphic	3 + 3	Monocarpellary

b)

A	B	C	D
Racemose	Actinomorphic	5	Bicarpellary

c)

A	B	C	D
Cymose	Zygomorphic	3+3	Tricarpellary

d)

A	B	C	D
Cymose	Actinomorphic	5	Multicarpellary

230. How many plants among Indigofera, Sesbania, Salvia, Allium, Aloe, mustard, groundnut, radish, gram and turnip have stamens with different lengths in their flowers?

a) Three b) Four c) Five d) Six

231. Androecium of pea is

a) Monoadelphous b) Diadelphous c) Polyadelphous d) Epihyllous

232. Plant having column of vascular tissues, bearing fruits and having a tap root system is _____ .

a) Monocot b) Dicot c) Gymnosperm or dicot d) Gymnospern or monocot

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

	Column-I		Column-II
A	Marginal	(i)	Sunflower, marigold
B	Parietal	(ii)	Pea
C	Axile	(iii)	Mustard, Argemone
D	Free central	(iv)	Hibiscus, tomato, lemon
E	Basal	(v)	Dianthus, Primrose

a) A-(ii), B-(iii), C-(iv), D-(v). E-(i) b) A-(i), B-(iii), C-(ii), D-(v), E-(iv)

c) A-(i), B-(ii), C-Illil). D-(iv), E-(v) d) A-(iii), B-(ii), C-(iv), D-(v). E-(i)

234. Fruit of brinjal is

a) Berry b) Hesperidium c) Drupe d) Pome

235. What is eye of potato?

a) Axillary bud b) Acessorybud c) Adventitious bud d) Apical bud

236. A family delimited by type of inflorescence is _____ .

a) Fabaceae b) Asteraceae c) Solanaceae d) Liliaceae

237. _____are the green stems of limited growth which have taken over the function of photosynthesis from leaves

a) Phylloclades b) Cladodes c) Phyllodes d) Stem thorns

238. Floral features are chiefly used in angiosperms identification because _____ .

a) Flowers are of various colours b) Flowers can be safely pressed
c) Reproductive parts are more stable and conservative than vegetative parts
d) Flowers are nice to work with

239. In which of the following family, perianth and trimerous flowers are found
a) Malvaceae b) Crucifereae c) Liliaceae d) Papilionaceae

240. 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, Pisstem 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

241. Endospermic seeds are found in
a) barley b) castor c) pea d) both (a) and (b).

242. An example of edible underground stem is :
a) Carrot b) Groundnut c) Sweet potato d) Potato

243. In som_____ the leaf base may become swollen and is called as _____
a) monocots, sheathing leaf base b) legumes, pulvinus
c) legumes, sheathing leaf base d) monocots, pulvinus

244. Botanical name of cauliflower is _____ .
a) Brassica oleracea var. capitata b) Brassica campestris
c) Brassica oleracea var. botrytis d) Brassica oleracea var. gemmifera

245. Polyadelphous stamens are found in
a) Cotton b) China rose c) Pea d) Lemon

246. Which plant part is modified into pitcher in pitcher plants?
a) Root b) Stem c) Leaf d) Flower

247. Butterfly shaped corolla is called
a) Campanulate b) Rotate c) Papilionaceous d) All

248. A modification of petiole is
a) Phyllode b) Phylloclade c) Cladode d) Corm

249. In Dianthus, placentation is

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

250. Venation is a term used to describe the pattern of arrangement of
a) floral organs b) flower in inflorescence c) veins and veinlets in a lamina
d) all of them

251. Buttress roots are found in _____ .
a) Sorghum b) Banyan c) Terminalia d) Pandanus

252. The technical term used for the androecium in a flower of China rose (Hibiscus rosa-sinensis) is :
a) Polyadelphous b) Monadelphous c) Diadelphous d) Polyandrous

253. Aestivation in the corolla of pisum sativum is
a) Imbricate b) Vexillary c) Quincuncial d) Valvate

254. Endosperm, a product of double fertilisation in angiosperms is absent in the seeds of
a) coconut b) orchids c) maize d) castor.

255. Sweet potato is homologus to
a) Turnip b) Potato c) Colocasia d) Ginger

256. Cereals, castor and coconut possess_____ seeds
a) endospermic b) zoospermic c) non-albuminous d) none of these

257. Which one of the following is a xerophytic plant in which the stem is modified into a flat, green and succulent structure?
a) Casuarina b) Hydrilla c) Acacia d) Opuntia

258. Which one of the following is exalbuminous seed?
a) Wheat seed b) Maize seed c) Castor seed d) Pea seed

259. The embryo in sunflower has _____ .
a) One cotyledon b) Two cotyledons c) Many cotyledons d) No cotyledon

260. In spiral phyllotaxy, the number of leaves at each node is
a) one b) two c) three d) many.

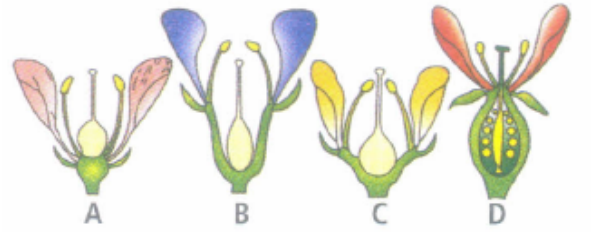
261. Which plant will lose its economic value if its fruits are produced by induced parthenocarpy?
a) Grape b) Pomegranate c) Banana d) Orange

262. Colchicum autumnale belongs to
a) Leguminosae b) Cruciferae c) Liliaceae d) Malvaceae

263. 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

264. 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

265. Which of the following is an incorrect pair?
a) Phylloclade - Opuntia b) Cladode - Ruscus c) Phyllode - Asparagus
d) Stem tendrils - Grapevine

266. Stems modified into flat green organs performing the functions of leaves are known as:
a) Scales b) Cladodes c) Phyllodes d) Phylloclades

267. Which of the following floral formulae corresponds to Family Liliaceae?

(A) (B) (C)

a) $\mathrm{Br}\oplus\male\ \mathrm{P}_{3+3}\mathrm{A}_{3+3}\overline{\mathrm{G}_{(3)}}$ b) $\mathrm{Br}\oplus\female\ \mathrm{P}_{3+3}\mathrm{A}_{0}\underline{\mathrm{G}_{(3)}}$ c) $\mathrm{Br}\oplus\male\ \mathrm{P}_{3}\mathrm{A}_{3}\underline{\mathrm{G}_{(3)}}$

(D)

d) $\mathrm{Br}\oplus\male\ \overset{\frown}{\mathrm{P}_{(3+3)}}\mathrm{A}_{3+3}\underline{\mathrm{G}_{(3)}}$

268. Vexillary aestivation is characteristic of the family _____ .
a) Fabaceae b) Asteraoeae c) Solanaceae d) Brassicaceae

269. An aggregate fruit is the one which develops from:

a) Multicarpellary, apocarpous gynoecium b) Complete inflorescence
c) Multicarpellary, superior ovary d) Multicarpellary, syncarpous gynoecium

270. 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)

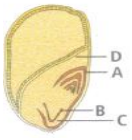
271. 'Simla mirch' chillies and potato belongs to family
a) Solonaceae b) Compositae c) Gramineae d) Cruciferae

272. Which floral family has (9) + 1 arrangement of anthers in the androecium?
a) Malvaceae b) Rutaceae c) Fabaceae d) Caesalpinaceae

273. Read the given statements.
(i) Gynoecium occupies the highest position while the other floral parts are situated below it.
(ii) Ovary is superior.
(iii) Examples are Brassica, Hibiscus, brinjal, etc.
Which condition of flowers is being described by the above statements?
a) Hypogyny b) Perigyny c) Epigyny d) None of these

274. Catkin inflorescence is found in
a) Wheat b) Oat c) Mulberry d) Fig

275. 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) Coleorhiza



a)

A	B	C	D
(i)	(vi)	(vii)	(ii)

b)

A	B	C	D
(ii)	(vii)	(v)	(i)

c)

A	B	C	D
(iv)	(iii)	(vi)	(vii)

d)

A	B	C	D
(iii)	(vii)	(vi)	(ii)

276. 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.

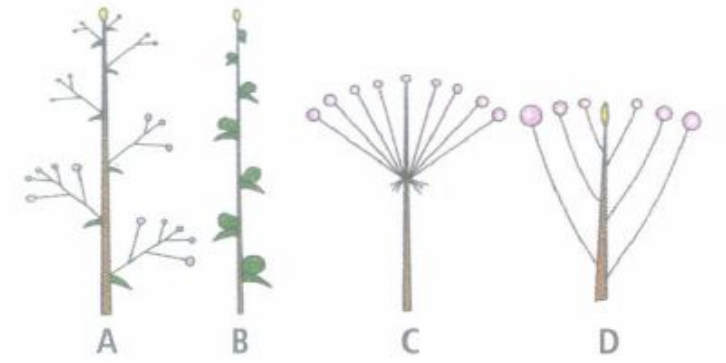
277. Vegetative reproduction of Agave occurs through _____ .
a) Rhizome b) Stolon c) Bulbils d) Sucker

278. Zygomorphic flower occurs in
a) Pea b) Gulmohur c) Cassia d) All of these

279. Which of the following is not stem modification:
a) Flattened structures of Opuntia b) Pitcher of Nepenthes c) Thorns of Citrus
d) Tendrils of cucumber

280. Vegetative propagation in Pistia occurs by :
a) Stolon b) Offset c) Runner d) Sucker

281. The given figure shows some types of inflorescences. Select the option that correctly identifies them.



a)

A	B	C	D
Panicle	Spike	Corymb	Catkin

b)

A	B	C	D
Spike	Panicle	Corymb	Catkin

c)

A	B	C	D
Panicle	Catkin	Umbel	Spike

d)

A	B	C	D
Panicle	Spike	Umbel	Corymb

282. In which of the families the stamens are in two whorls and epiphyllous
a) Malvaceae b) Malvaceae c) Liliaceae d) Caesalpinoideae

283. Bicarpellary ovary with parietal placentation and false septum is found in
a) Cruciferae b) Leguminosae c) Malvaceae d) Compositae

284. Botanical name of pea plant is
a) Pisum sativum b) Pinus sativus c) Pyrus sativus d) Pisum sativus

285. The morphological nature of the edible part of coconut is:
a) Cotyledon b) Endosperm c) Pericarp d) Perisperm

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

a)

P	Q	R
Standard	Wing	Ala

b)

P	Q	R
Standard	Keel	Wing

c)

P	Q	R
Wing	Keel	Carina

d)

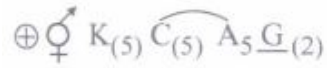
P	Q	R
Standard	Ala	Carina

287. Assertion: Avicennia has pneumatophores.
Reason : Pneumatophores help the plant to get oxygen for respiration
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

288. Allium cepa (onion) belongs to the family
a) Solonaceae b) Liliaceae c) Cruciferae d) Compositae

289. Assertion: Fruit is the mature or ripened ovary developed after fertilisation
Reason: Fruit formed without fertilisation of the ovary is called parthenocarpic fruit.
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

290. Assertion : The floral formula of Family Solanaceae is



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

291. Identify the type of modified root and select the correct statement regarding it.

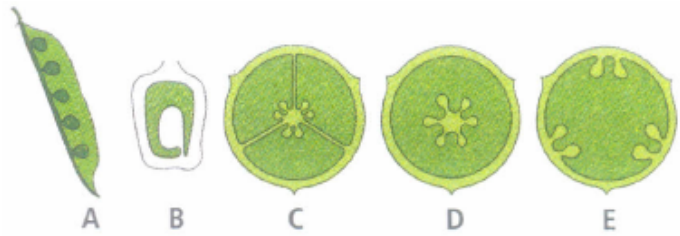
a) It is the tuberous root of Dahlia that stores inulin as reserve food.
b) It is a modified taproot that occurs in Dahlia.
c) It is a modified adventitious root that stores reserve food material.
d) These roots are modified to provide mechanical support to the plant.

292. 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)

293. Identify the different types of placentation shown in figure and select the correct option.



a)

A	B	C	D	E
Axile	Marginal	Free central	Parietal	Basa

b)

A	B	C	D	E
Marginal	Basal	Axile	Free central	Parietal

c)

A	B	C	D	E
Marginal	Axile	Parietal	Free central	Basal

d)

A	B	C	D	E
Marginal	Parietal	Axile	Basal	Free centra

294. Roots associated with nitrogen fixing bacteria are
a) Fusiform roots b) Napiform roots c) Nodulated roots d) Conical roots

295. How many plants in the list given below have marginal placentation?
Mustard, Gram, Tulip, Asparagus, Arhar, Tobacco Sunhemp, Chilli, Colchicine, Onion, Moong, Pea, Lupin.

a) Four b) Five c) Six d) Three

296. Persistent calyx is the character of plants belonging to Family
a) Solanaceae b) Malvaceae c) Cruciferae (Brassicaceae) d) Compositae.

297. Coleorhiza and coleoptile are the protective sheaths covering _____ and _____ respectively
a) radicle, plumule b) plumule, radicle c) plumule, hypocotyl d) epicotyl, radicle

298. New banana plants develop from _____ .
a) Rhizome b) Sucker c) Stolon d) Seed

299. Inferior ovary is present in
a) Hypogynous flower b) Perigynous flower c) Dichogamous flower
d) Epigynous flower

300. Assertion: The cymose type of inflorescence has limited growth.
Reason: In cymose inflorescence the main axis terminates in a flower
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

301. _____are one internode long runners, usually found in rosette plants at the ground/water level.
a) Trailers b) Offsets c) Stolons d) Rhizomes

302. Which is correct pair for edible part?
a) Tomato - Thalamus b) Maize - Cotyledons c) Guava - mesocarp
d) Data palm - Mesocarp

303. Non-albuminous seed is produced in:
a) Maize b) Castor c) Wheat d) Pea

304. Flowers are zygomorphic in:
a) Mustard b) Gulmohur c) Tomato d) Datura

305. In _____ placentation, a monocarpellary ovary bears a single longitudinal ovule along the junction of two fused margins
a) axile b) parietal c) free central d) marginal

306. Study carefully the given floral diagram and select the option which correctly represents the related floral formula.

(A) (B) (C)

a) $\oplus \varnothing \overset{\frown}{P_{(3+3)}} A_{3+3} \underline{G}_{(3)}$ b) $\oplus \varnothing P_6 A_6 \underline{G}_{(3)}$ c) $\oplus \varnothing P_{5+5} A_{(5)} \underline{G}_{(2)}$

(D)

d) $\oplus \varnothing K_{(5)} \overset{\frown}{C_{(5)}} A_{(5)} \underline{G}_{(2)}$

307. Atropa belladona, an important medicinal plant is of the family
a) Liliaceae b) Cucurbitaceae c) Cruciferae d) Solonaceae

308. A dicot plant showing parallel venation is
a) Smilax b) Calophyllum c) Cotton d) Mango

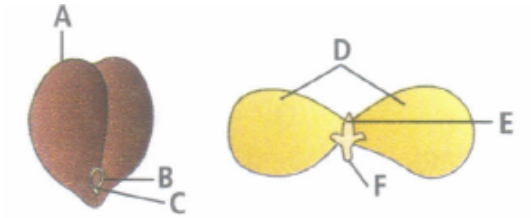
309. Reticulate venation is a characteristic of dicots. An exception to this generalisation is
a) Ca/ophyllum b) Ficus c) Hibiscus d) Zizyphus.

310. Edible part in pomegranate is
a) Testa b) Epicarp c) Endocarp d) Epidermis

311. Which of the following figures represents a typical placentation as seen in Hibiscus rosa sinensis (China rose)?

a)  b)  c)  d) 

312. Refer to the given figures showing structure of dicotyledonous seed and select the option that correctly identifies any of the labelled parts.



a) A-Seed coat, B-Cotyledon, C-Plumule b) D-Micropyle, E-Hilum, F-Radicle
c) B-Hilum, E-Plumule, F-Radicle d) C-Cotyledon, D-Micropyle, E-Radicle

313. If the filaments are fused in a single group the condition is
a) Monoadelphous b) Polyadelphous c) Both 1 & 2 d) Diadelphous

314. Radial symmetry is found in the flowers of :
a) Cassia b) Brassica c) TrifoLium d) Pisum

315. Ground nut belongs to family

a) Fabaceae b) Malvaceae c) Liliaceae d) Cucurbitaceae

316. In Ruscus, the modification is

a) Phyllode b) Cladode c) Offset d) Sucker

317. Fruit legume is characteristic feature of

a) Solonaceae b) Liliaceae c) Fabaceae d) Fabaceae

318. Which is an example of offset?

a) Cynodon dactylon b) Eichhornia c) Fragaria d) Mentha

319. In ginger vegetative propagation occurs through

a) Offsets b) bulbils c) Runners d) Rhizome

320. 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

321. Read the given statements and select the correct ones.

(i) Root caps are present in prop roots.

(ii) Pneumatophores help to get oxygen for respiration

(iii) Edible part of ginger is underground stem

(iv) Hydrophytes usually possess a well developed root system

a) (i) and (ii) only b) (ii) and (iii) only

c)

Hydrophytes are plants adapted for growing in water. In hydrophytes, roots are of secondary importance so they are poorly developed.

d) (i), (ii), (iii) and (iv)

322. The ovary is half inferior in :

a) Sunflower b) Plum c) Brinjal d) Mustard

323. Find correct match

	Column - I		**Column - II**
a.	Bulb	(i)	Potato
b.	Rhizome	(ii)	Jasmine
c.	Stolon	(iii)	Ginger
d.	Tuber	(iv)	Allium

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

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

324. Select the incorrect pair out of the following

a) Monadelphous - Hibiscus b) Diadelphous - Cucurbita

c) Polyadelphous - Citrus d) Syngenesious - Helianthus

325. The ornamental leguminous plant is

a) Tulip b) Petunia c) Sesbania d) Lupin

326. Nodulated roots occurs in

a) Liliaceae b) Solonaceae c) Malvaceae d) Fabaceae