Unit-II

Chapter-7 & 8. Morphology of Plants

IMPORTANT POINTS

Flowering plants are the most dominant plants of the earth, exhibit some variations in morphology, possess well-developed shoot and root systems, which is positively geotropic and hydrotropic and negatively phototropic, and develops from radical. Dicot plants have tap root system and monocots have fibrous root system. Roots help in fixation of plant in soil, and absorption of water and minerals. They also help in storage of food, mechanical support, climbing, photosynthesis, respiration, absorption of moisture, parasitism, symbiosis and reproduction. On the other hand, shoot system is developed from plumule, negatively geotropic and hydrotropic, and positively phototropic, which is differentiated into stem, leaves, flowers and fruits. Stem possesses node, internode, leaves, hairs, axillary & apical buds. Stem helps in storage of food, reproduction, protection, climbing and photosynthesis. On the basis of types of venations, there are two types of leaves – reticulate and parallel. Leaves are also of two types – simple and compound. On the basis of arrangement, leaves are of three types – alternate, opposite and whorled. Leaves help in storage of food, support, climbing and protection.

Arrangement of flowers is known as Inflorescence, which is of two types – racemose and cymose. A typical flower consists of four whorls – calyx, corolla, androecium and gynoecium. Arrangement of sepals or petals in flower is called aestivation, which are five types – valvate, twisted, imbricate, quincuncial and vexillary. Of these, androecium is composed of stamens, which may be free or united; Each stamen consists of filament, anther and connective, while gynoecium is made up of carpels, consists of stigma, style and ovary. Arrangement of ovules within ovary is known as placentation, which may be marginal, axile, parietal, basal and central. After fertilization, ovary is converted into fruit and ovules into seeds. There are three types of fruits – simple, aggregate and composite. Fleshy fruits are of three types – drupe, berry and pome. Seeds are either monocotyledonous or dicotyledonous, exospermic or endospermic. Floral features of any plant is exhibited by floral diagram and floral formula.

1. Fibrous root in maize develop from:
   (a) Lower internodes   (b) Lower nodes
   (c) Upper nodes        (d) None of the above

2. Which of the following plants have root pockets?
   (a) Eichhorinia    (b) Capparis    (c) Opuntia    (d) Banyan

3. In which of following, the plants have all roots?
   (a) Podostemon    (b) Lemna      (c) Wolffia    (d) Utricularia

4. Food present in bulbil occurs in:
   (a) Root        (b) Stem      (c) Leaf base  (d) Petioles
5. Form which point of root, root hairs develop?
   (a) Region of maturation (b) Region of elongation
   (c) Meristematic region (d) Region of root cap

6. Epiphytic roots are found in:
   (a) Indian rubber (b) Orchid (c) Tinospora (d) Cuscuta

7. Potatoes are borne on:
   (a) Primary roots (b) axil of scaly leaves
   (c) Lateral roots (d) Adventitious roots

8. Some plans have rhizome and roots as underground structures. Which characteristics of rhizome would distinguish them from roots?
   (a) Rhizomes are thicker than roots. (b) Rhizomes have scaly leaves
   (c) Rhizome are thinner than roots (d) None of the above

9. Sweet potato is a modification of:
   (a) Primary root (b) leaf (c) underground root (d) Adventitious root

10. Roots are differentiated into adventitious roots by their:
    (a) Function (b) appearance (c) place of origin (d) position

11. Winged petiole is found in:
    (a) citrus (b) acacia (c) radish (d) peepal

12. In one of the following the stem performs the function of storage and propagation:
    (a) Ginger (b) Wheat (c) Radish (d) Groundnut

13. Leaves are attached to the stem at:
    (a) Apical meristem (b) Internode (c) Nodes (d) Axillary meristem

14. Phyllotaxy refers to:
    (a) Arrangement of leaves on stem (b) Folding leaf in the bud
    (c) (a) & (b) both (d) None of the above

15. Plants with jointed stem and hollow internodes are known as:
    (a) Clusils (b) Scape (c) Ephemerals (d) Lianas

16. Bulbils take part in:
    (a) Sexual reproduction (b) Respiration (c) Transpiration (d) Vegetative reproduction

17. Stem is very much reduced in:
    (a) Tuber (b) Bulb (c) Corm (d) Rhizome

18. Turmeric is a stem and not a root because:
    (a) It stores food material (b) It grows parallel to soil surface
    (c) It has nodes and internodes (d) It has chlorophyll

19. A potato tuber is underground stem because:
    (a) It has swollen and non-green
    (b) It possesses axillary buds
    (c) It possessor starch as stored food.
    (d) It possess starch as stored food
20. Grasses are examples of the following type of stem:
   (a) Suckers (b) Runners (c) Stolon (d) Rhizomes.
21. Red root is name of:
   (a) Carrot (b) Sweet potato (c) Potato (d) Beet root
22. Tiny sacs or bladders are found in:
   (a) Utricularia (b) salvinia (c) nepenthes (d) Hydrilla
23. Which would do maximum harm to a tree? The loss of:
   (a) Half of its branches (b) All of its leaves (c) Half of its flower (d) Half of its bark
24. Smallest dicotyledonous parasitic plant of the world is: (JIPMER 1997)
   (a) Coryadalis nana (b) Primula minutissina
   (c) Arcethobium minustissimum (d) Marsilea minuta
   (a) Develop from radical (b) Develop from flower
   (c) Develop from embryo (d) Develop from any part of plant body except radical
26. The arrangement of leaves on stem is called:
   (a) Venation (b) Vernation (c) Phyllotaxy (d) Axis
27. Stem modified into flattened photosynthetic structure is:
   (a) Phylloclade (b) Bulbil (c) Phylloclade (d) Tendril
   (a) Leguminocoeae (b) Solanaceae (c) Malvaceae (d) Papilionaceae
29. Insectivorous plants catch insects for obtaining:
   (a) Na - K (b) Taste (c) Phosphorus (d) Nitrogen
30. Petiole is modified into tendril in
   (a) Passiflora (b) Gloriosa (c) Pisum (d) Clematis
31. Thorn is a stem structure because it:
   (a) Develops from trunk (b) Develops from apical bud
   (c) Modification of bank floralbud (d) is pointed
32. Vegetative reproduction of Agave occurs through:
   (a) Rhizome (b) Stolon (c) Bulbils (d) Sucker
33. What is the eye of potato?
   (a) Axillary bud (b) Accessory bud (c) Adventitious bud (d) Apical bud
34. If a raceme inflorescence is branched, it is call?
   (a) Umbel (b) spike (c) Cymose (d) Panicle
35. Zig-zag development of inflorescence axis is an example of:
   a) Helicoid cyme  b) Scorpioid  c) Umbel  d) Compound umbel

36. Opposite decussate phyllotaxy is found in:
   a) Calotropis  b) Mango  c) Hibiscus  d) Nerium

37. A brightly coloured bract like covering associated with the banana inflorescence is called:
   a) Spathe  b) Scape  c) Spiral  d) Scapigeron

38. Inflorescence is:
   a) Number of flower present on an axis
   b) Arrangement of flowers on an axis
   c) Method of the opening of flower
   d) Type of flower borne on peduncle

39. In monocot male gametophyte is: (C.B.S.E.1990)
   a) Megaspore  b) Nucleus  c) Microspore  d) Tetrad

40. A catkin of unisexual flower is found in:
   a) Mulberry  b) Wheat  c) Onion  d) Grass

41. Flower is a:
   a) Modified cone  b) Modified spike
   c) Modified branch system  d) Modified reproductive shoot

42. Flowers are always present in:
   a) Cryptogamous  b) Pteridophytes
   c) Angiosperms  d) Bryophytes

43. Floral formula represents:
   a) Number and arrangement of floral parts
   b) Number of flowers in an inflorescence
   c) Type of flowers in a family
   d) None of above

44. From the life cycle point of view the most important part of a plant is:
   a) Flower  b) Leaf  c) Stem  d) Root

45. The vexillum, (standard) wings and keel in pea flowers constitute:
   a) Calyx  b) Corolla  c) Androecium  d) Gynaecium

46. Diadelphous condition is present on:
   a) Citrus  b) Bombyx  c) Pisum  d) Brassica

47. Number of female flowers in a cyathium is: (keralaCET,05 UPCPMT,07 A.P.M.E.E. 1995)
   a) One  b) Two  c) Three  d) Many

48. Perianth is found in a flower in which:
   a) Calyx and Corolla are not distinguishable
   b) Stamens are leaf like
   c) Corolla leaf-like but calyx is colored
   d) None of the above
49. Staments with free anthers but filaments fused into a number of groups are;
   a) Polyadelphous  b) Diadelphous  c) Monadelphous  d) Syngenesious
50. Pappus is a modification of :
   a) Calyx  b) Corolla  c) Stamens  d) Gynoecium
51. Placentation in legumes is:  (N.C.E.R.T.1988,C.P.M.T. 19977)
   (a) Basal  (b) Marginal  (c) Axile  (d) Free central
52. The leaves are modified into tendrils, hooks, pitcher ,and bladder in the following plants respectively:
   a) sweet pea, bignonia, Nepenthes, Utricularia
   b) sweet pea, bignonia, Utricularia, Nepenthes,
   c) Nepenthes , bignonia, sweet pea, Utricularia
   d) Utricularia, Nepenthes, bignonia, sweet pea
53. Leaf apex is modified into tendril in:
   (a) Smilax  (b) Gloriosa  (c) Australian acacia  (d) Pea
54. A fibrous root system is better adapted than tap root system for:
   (a) Storage food  (B.H.U. 1993)
   (b) Anchorage of plant to soil
   (c) Absorption of water and organic food.
   (d) Transport of water and organic food.
55. Which is not a stem modification?  (AFMC 1988)
   a) Rhizome of Ginger  
   b) Corm of Colocasia  
   c) Pitcher of Nepenthes  
   d) tuber of potato
56. A pair of insectivorous plant is:  (C.B.S.E. 1999)
   a) Dionaea and viscum  
   b) Nepenthes and bladderwort  
   c) Drosera and rafflesia  
   d) Venus fly and Rafflesia
57. A phyllode is a modified:  (Kerala CET 2004)
   a) leaf  
   b) stem  
   c) root  
   d) branch
58. An underground specialized shoot with reduced disc like stem covered by fleshy leaves is:
   (J.K.R.E.T. 2000)
   a) bulb  
   b) Rhizome  
   c) rhizophore  
   d) bulbil
59. Stipular tendril modification is found in :
   (Pb. PMT2001)
   a) Smilex  
   b) Pea  
   c) Guava  
   d) Mimosa pudica
60. Viscum is:  (AFMC 2004)
   a) total stem parasite  
   b) total root parasite  
   c) partial stem parasite  
   d) partial root parasite
61. Root pocket does not occur in :
   (Orrisa 2004)
   a) Ipomoea  
   b) Mangrove plants  
   c) trapa  
   d) pistia
62. Phylloclades are: (JKCME 2004)
   a) leaf modification   b) one internode and long stem
   c) modified petioles   d) green succulent stem of indefinite growth

63. Bladder of Utricularia and Pitchers of nepenthes are modifications of: (JKCME 2004)
   a) leaves   b) stems   c) root   d) flowers

64. Tallest gymnosperm: (AFMC 2006)
   a) sequoia   b) Eucalyptus   c) Pinus   d) Rannuncoulus

65. The “Eyes” of the potato tuber are: (A.P.M.T. 2011)
   a) Root buds   b) Flower buds   c) Shoot bud   d) Axillary buds

66. Vexillary aestivation is characteristic of the family:
   a) Asteraceae   b) Solanaceae   c) Brassicaceae   d) Fabaceae

67. Mangrove plant live in:
   a) Alpine Tundra   b) Tundra
   c) Marshy areas along rivers   d) Marshy areas along sea shore

68. Succulents are likely to be found in:
   a) Tropical rain forest   b) Deciduous forest
   c) Deserts   d) Tundra

69. In a compound umbel each umbellate is subtended by:
   a) Involucre   b) Bracket
   c) Involucel   d) Bracteole

70. In the monocotyledonous seeds the endosperm is separated from the embryo by a distinct layer known as: (Kerala 2008)
   a) testa   b) epithelial layer   c) tegmen   d) scutellum   e) coleoptile

71. The fleshy receptacle encloses a number of: (C.B.S.E. 2008)
   a) Berries   b) achene   c) Unisexual flower   d) Samaras

72. The ovary is half inferior in flowers of: (A.I.P.M.T. 2011)
   a) Peach   b) Cucumber   c) Cotton   d) Guava

73. Which one of the following statements is correct? (A.I.P.M.T. 2011)
   a) In tomato, fruit is capsule
   b) Seeds of orchids have oil-rich endosperm
   c) Placentation in primrose is basal
   d) Flower of tulip is a modified shoot.

74. Flowers are zygomorphic in: (A.I.P.M.T. 2011)
   a) Mustard   b) Gulmohar   c) Tomato   d) Datura

75. Phyllode is present in: (A.I.P.M.T. 2012)
   a) Euphorbia   b) Australian Acacia   c) Opuntia   d) Asparagus

76. Cymose inflorescence is present in: (A.I.P.M.T. 2012)
   a) Sesbania   b) Trifolium   c) Brassica   d) Solanum
77. The seed can be defined as:
   (a) An immature embryo protected by coats
   (b) A mature ovule with a dormant embryo with enough reserve food and protective coating.
   (c) A mature spore with enough reserve food and protective coatings
   (d) A mature ovary with reserve food and protective coverings

78. In the maize grain, the starchy food is stored in:
   (a) Cotyledons   (b) Coleoptile   (c) Aleurone layer   (d) Endosperm

79. Which one of the following is not fruit?
   (a) Cabbage       (b) Apple      (c) Watermelon     (d) Tomato

80. What is the edible part of Mango?
   (a) Epicarp       (b) Mesocarp    (c) Endocarp       (d) Thalamus

81. A fruit in which the fruit wall (pericarp) and seed coat have got fused is called
   (a) Legume       (b) Caryopsis  (c) Nut            (d) drupe

82. A composite or multiple fruit develops from:
   (a) Polycarpellary ovary (b) Bicarpellary and syncarpous ovary
   (c) Apocarpous ovary     (d) Inflorescence

83. Wheat grain is an example of:
   (a) Achene        (b) Caryopsis  (c) Nut            (d) Follicle

84. Which fruit is a type of nut?
   (a) Ground nut (b) Oat       (c) Walnut         (d) Cashew nut

85. What is the edible part in coconut?
   (a) Entire seed (b) Fruit wall
   (c) Endosperm (d) None of the above

86. Water inside a coconut is:
   (a) Liquid endosperm (b) Liquid endocarp
   (c) Liquid Mesocarp (d) Liquid Nucleus

87. False fruit is a fruit which develops from:
   (a) Ovary
   (b) Any part of the flower except the ovary
   (c) Aporcarpous carpellary
   (d) Syncarpous carpellary

88. Fibers are found on the seeds of:
   (a) Calotropis (b) Gossypium (c) Alstonia     (d) All of above

89. Which is the correct pair for edible part? (C.B.S.E.2001)
   (a) Tomato - Thalamus (b) Maize – Cotyledons
   (c) Guava - Mesocarp   (d) Date Palm- Pericarp
90. How many plants in the list given below have composite fruits that develop from an inflorescence? (A.I.P.M.T. 2012)
Walnut, poppy, radish, pineapple, apple, tomato, mulberry.
(a) Five  (b) Two  (c) Three  (d) Four

91. A characteristic of angiosperm is: (AFMC 1992,Hariyana,PMT, 1994)
(a) Flower  (b) Root  (c) Seed  (d) All of these

92. The capacity for vegetative reproduction is found in:
(a) Leaves  (b) Roots  (c) Stem  (d) All of above

93. ______ are the vegetative organs of the flowering plants:
(a) Root, stem, flower (b) Leaves, stem, fruits (c) Roots, leaves, flowers (d) Roots, stem, leaves

94. A root can be differentiated from the stem because of the absence of:
(a) Green colour  (b) Nods and internodes (c) Hair  (d) Branches

95. Which one of the following is not a characteristic of root:
(a) Presence of root tap  (b) Presence of unicellular hair (c) Presence of chlorophyll  (d) Absence of buds

96. When the trunk is unbranched and bears crown of leaves at its apex, it is known as:
(a) Runner  (b) Sucker  (c) Caudex  (d) Culm

97. Parallel venation is a characteristic of:
(a) Legumes  (b) Grasses  (c) Parasitic plants  (d) Xerophytic plants

98. Leaf morphology helps in:
(a) Plant identification  (b) Plant classification (c) None of these  (d) (a) & (b) both

99. When the stem or its branch ends into floral bus:
(a) Vegetative growth starts  (b) Reproductive growth starts (c) Lateral branch is given out  (d) Apical growth is stimulated

100. Root that grow from any part of the plant body other than the radical are called? (AFMC 2010)
(a) Tap root  (b) Adventitious root  (c) Modified roots  (d) Aerial roots

101. _____ require more than two growing seasons to complete their life cycle.
(a) Annual  (b) Perennials  (c) Biennials  (d) Herbs

102. Modified stem of_______ protect the plant from grazing animal.
(a) Datura festuosa  (b) Aloe vera  (c) Gloriosa superba  (d) Carissa carandus
103. Which of the following is actually not a flower?
   (a) Shoe flower    (b) Sun flower    (c) Rose    (d) Pea

104. Beauty of Bougainvillea flower are: (AFMC, 1997)
   (a) Corolla    (b) Calyx    (c) Bracts    (d) Androecium

105. Flower in which only set of one essential organ develops are call: (Kerala, PMT, 04)
   (a) Unisexual    (b) Monoecious    (c) Dioecious    (d) Polygamous

106. Individual components of Perianth are call:
   (a) Sepals    (b) Petals    (c) Tepals    (d) Brackets

107. Brinjal show ______ calyx.
   (a) Pappus    (b) Deciduous    (c) Caduceus    (d) Persistent

108. The hairs present in maize corn cob are: (AIPMT, 2000, 2006)
   (a) Styles    (b) Stigma    (c) Seed hairs    (d) Modified hairs of bracts

109. Seed is:
   (a) Fertilized embryo    (b) Fertilized ovary    (c) Fertilized fruit    (d) Fertilized ovule

110. A pome fruit is said to be false because: (CPMT 2000)
   (a) The pericarp is inconspicuous
   (b) The endocarp is cartilaginous
   (c) The fruit is present in fleshy edible thalamus
   (d) The fruit is derived from inferior ovary

111. Geocarpic fruit is: (AIPMT 2002)
   (a) Potato    (b) Pea nut    (c) Onion    (d) Garlic

112. Unifoliate leaf is found in: (BHU 2002)
   (a) Pea    (b) Citrus    (c) Royal palm    (d) Oil palm

113. Drupe has:
   (a) hard Epicarp    (b) hard endocarp    (c) hard mesocarp    (d) no epicarp

114. Zygomorphic condition can be represented as: (UP CPMT, 2009)
   (a) ⊕    (b) %    (c) P    (d) G

115. Which of these characters do not belong to Compositae? (CPMT, 1991)
   (a) Ligulate ray flowers    (b) Basal ovules
   (c) Syngenesious stamens    (d) Five lobed stigma

116. An inflorescence always forms a: (Punjab PMT 1997)
   (a) Multiple or composite fruit    (b) Simple fruit
   (c) Dry dehiscent fruit    (d) Aggregate fruit
117. Which of the following pairs is not correct? (J & k, 2004)
   (a) Corymb - Candytuft  
   (b) Capitulum - sunflower  
   (c) Catkin – Mulberry  
   (d) Raceme – Wheat

118. Find the incorrect match.
   (a) Stilt root - turnip  
   (b) Tap root - carrot  
   (c) Adventitious root - sweet potato  
   (d) Prop root- banyan tree

119. Which of the following is a wrong pairing?
   (a) Raceme - Mustard  
   (b) spike - Achyranthus  
   (c) compound umbel - Onion  
   (d) spadix - musa

120. The correct match for edible part of fruit is: (AIPMT,CBSE 2001)
   (a) Guava – pericarp with thalamus  
   (b) Tomato – thalamus  
   (c) Maize – cotyledon  
   (d) Date palm – epicarp

121. The correct match for Branching
   Column I          Column II
   (P) Mirabilis     I sympodial
   (Q) Polyalthea    II dichotomous
   (R) Vitis         III monopodial axis
   (S) Hyphaene      IV Cymose
   (a) (P)-III, (Q)–IV, (R)-I, (S)-II  
   (b) (P)-I, (Q)-IV, (R)- III, (S)- II  
   (c) (P) - IV ,(Q) - III (R)-I, (S)- II  
   (d) (P)-IV (Q)- III, (R)- II , (S)- I

122. Select the correct pair
   Column I          Column II          Column III
   (a) Unilocular Ovary (p) Five Chamber  I Petuna  
   (b) Bilocular Ovary (q) Three Chamber  II Asparagus  
   (c) Trilocular Ovary (r) One Chamber  III Hibiscus  
   (d) Pentalocular Ovary (s) Two Chamber  IV Sunflower
   A: (a)-(r)-(IV, (b)-(s)-(III , (c)- (p)-(II, (d)- (q) -I
   B: (a)-(r)-(IV, (b)-(s)-(I, (c)- (q)- II, (d)-(p)-III
   C: (a)-(s) -(I, (b)-(r)- II,(c)- (q)- IV, (d)-(p)-III
   D: (a)-(q)-II, (b)-(r)-I (c)- (s)- III, (d)-(p)-IV
123. Select the correct pair

(P) Onion  (I) tubers
(Q) pea  (ii)phylloclade
(R) Potato  (iii) tunicated bulb
(S) muehlenbeckia  (iv)follaceous stipules

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

124. Match the following with correct combination.

Colum I  Colum II
(P) Marginal Placentation  I  Petuna
(Q) Axial Placentation  II  Dianthus
(R) Free central Placentation  III  Mustard
(S) Parietal Placentation  IV  Pea

(a): (P)- II, (Q)- I, (R)-IV,(S)-III  (b): (P)-III, (Q)-IV, (R)-II,(S)- I
(c): (P)- IV ,(Q) – I,(R)-II ,(S)-III  (d): (P)-IV ,(Q)– I, (R)-III,(S)- II

125. Match list I with list II and select the correct answer using the codes given below the lists.

List I  List  II
P. Total stem parasite  I  Loranthus
Q. Assimilatory root  II  Pothos
R. clinging root  III  Tinospora
S. partial parasite  IV  cuscuta

P  Q  R  S
(a) IV  II  III  I  (b) IV  III  II  I
(c) II  III  I  IV  (d) II  IV  III  I

126. Match list I with II types of leaves

List I  List II
(p) leaf included with in seed  I  scaly leaf
(q) small or papery leaf  II  bract
(r) stamen and Carpel  III  seed leaf
(s) which a flower develops is  IV  soprophylls

P  Q  R  S  P  Q  R  S
(a) III I IV II  (b) I  III II IV
(c) III IV I II  (d) III II I IV
127. Match sign with select the correct answer using the codes given below the lists.

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(a) I II III IV
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(c) II III I IV
(d) IV I III I

128. Select the wright pair :

(a) Mustard plant : \( \oplus, \odot, K_{2+2} C_{4} A_{2+4} G_{(2)} \)
(b) Legume : Br, \( \ominus \), \&., K_{5}, C_{1+2+2}, A_{1+9}, G_{1}
(c) Solanum: Ebr\( \ominus \), \&., K_{5}, C_{(5)} A_{5}, G_{(2)}
(d) Asphodelus: Br\( \ominus \), \&., P_{3+3}, A_{3+3}, G_{(3)}

129. Labeling the following diagram:

(a). p-leaf  q. –stem  r. - fruit  s- flower
(b). p- flower  q- stem  r- leaf  s- fruit
(c). p- leaf  q-stem  r- flower,  s- fruit
(d). p- flower  q- leaf  r- stem  s- fruit

130. Which plant is this and live in _____ habitat.

(a) Opuntia , ever green
(b) Muehlenbevkia, dry
(c) Dioscorea , thorn forest
(d) Agave , desert

131. Identify the inflorescence

(a) Raceme
(b) Spike
(c) Helicoid
(d) Scorpioid

132. Give the name in following

(a) P-terminal bud , q-old flower  r-floral bud, s-leaf
(b) P- terminal bud, q- floral bud, r- old flower, s- leaf
(c) P- old flower, q- terminal bud r- leaf s-floral bud
(d) P- leaf, q- floral bud, r- old flower, s- terminal bud
133. Name of the following aestivation type:
   (a) Valvate
   (b) Twisted
   (c) Imbricate
   (d) Quincuncial

134. Labeling the given figure:
   (a) P- stigma q- style
   (b) P- anther q- filament
   (c) P anther q- style
   (d) P- stigma q- filament

135. Identify this plant modification and Select the correct option
   (a) Sweet potato – simple tuberous root
   (b) Dahlia – fasciculated tuberous root
   (c) Asparagus - simple tuberous root
   (d) Beet – tap root

136. Labeling ‘p’ in root section
   (a) Velamen tissue
   (b) Meristematic tissue
   (c) Growth tissue
   (d) Fleshy tissue

137. Name the labeled ‘x’ in plant
   (a) Thorn
   (b) Hook
   (c) Prickles
   (d) Stipules

138. Choose correct option according to given leaf:
   (a) Moringa – multipinnate compound leaf
   (b) Balanites- Bifoliate compound leaf
   (c) Caesalpinia - bipinnate compound leaf
   (d) Aegle – multifoliate
139. Choose the correct option by given diagram:
(a) Scorpioid - Heliotropium
(b) Scorpioid - Hamelia
(c) Spike - Achyranthus
(d) Spike – musa

140. Name the labeled flower part.
(a) P-peduncle, q-ovary r-stigma, s-calyx, t-thalamus
(b) P-corolla, q-anther, r-stigma, s-calyx, t-peduncle
(c) P-petals, q-style, r-stigma, s-stamen, t-ovary
(d) P-corolla, q-anther, r-style, s-calyx, t-thalamus

141. Choose correct option by giving diagram:
(a) C- vexillary, D-Quincuncial, E-Imbricate
(b) C-vexillary, D-Imbricate, E-Quincuncial
(c) C-Imbricate, D-Quincuncial, E-vexillary
(d) C-Imbricate, D-vexillary, E-Quincuncial

142. Choose correct option
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<td>(p) polydelphous</td>
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<td>(q) monodelphous</td>
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<td>(r) diadelphous</td>
<td>III citrus</td>
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(a) P-III, q-I, r-II
(b) P-III q-II, r-I
(c) P-I, q-III, r-II
(d) P-II, q-III, r-I

143. Choose the correct option by given placentation
(a) P-free central-Dianthus, q-parietal-Tomato, r-Marginal-Bean
(b) P-parietal-Tomato, q-Marginal-sunflower, r-free central-Bean
(c) P-parietal-Argemone, q-free central-Bean, r-Marginal-sunflower
(d) P-free central-Dianthus, q-parietal-Argemone, r-Marginal-Bean
144. Name the labeling part of given diagram:
   (a) P – Endosperm q- embryo
   (b) P-seed coat q- coleoptile
   (c) P- Endosperm q- cotyledon
   (d) P- seed coat q – embryo

145. Name in given floral diagram:
   (a) P-Calyx, q-Corolla, r-Androecium, s- Gynoecium, t- Mother axis
   (b) P-Calyx, q-Androecium, r- Gynoecium, s-Corolla, t-Mother axis
   (c) P- Corolla, q- Calyx, r-Androecium, s- Gynoecium, t- Mother axis
   (d) P- Corolla , q- Calyx , r- Gynoecium , s Androecium -t- mother axis

146. Name the following part of seed:
   (a). p-seed, q-endocarp, r-mesocarp, s-exocarp
   (b). p-endocarp, q-seed, r- exocarp , s-mesocarp
   (c). p- seed, q-endocarp, r-mesocarp, s- exocarp
   (d). p-endocarp, q- seed, r- exocarp , s-mesocarp

S- R Type MCQ’s
S= Statement
R= Reason

(A) S and R both are true, where R is definition of S
(B) S and R both are true, where R is not reason of S
(C) S is true, R is false
(D) S is false , R is true

147. S: leaf to prepare food by carrying out photosynthesis
   R: Leaf to arrange gaseous exchange for respiration
   (A) (B) (C) (D)

148. S: The loranthus plant possess nodules on their root system
   R: Rhizobium bacteria live in root nodules
   (A) (B) (C) (D)

149. S: In perigynous flower , the thalamus becomes flat, disc like
   R: The flower whorls are arranged on the rim of the thalamus
   (A) (B) (C) (D)

150. S: In caryopsis the pericarp and seed coat are fused and form a ‘hull’
   R: Tridex and vernonia are example of caryopsis
   (A) (B) (C) (D)

151. S: Gloriosa superba is a scientific name of vachhnaug
   R: vachhange having reticulate venation
   (A) (B) (C) (D)
# ANSWER KEY

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