

121. During the post-fertilization period, the ovules develop into ___A___ and the ovary matures into a ___B___.
- (1) A - seeds; B - fruit (2) A - fruit; B - seeds
(3) A - flower; B - seed (4) A - seeds; B - flower
122. A scar on the seed coat through which the developing seeds are attached to the fruit is called as _____.
- (1) Testa (2) Tegmen (3) Hilum (4) micropyle
123. Floral formula of petunia is
- (1) $\oplus \overset{\uparrow}{\ominus} K_{+5} A_{10} \overline{G}_{(2)}$ (2) $\oplus \overset{\uparrow}{\ominus} K_{2+2} C_4 A_{2+4} \overline{G}_1$ (3) $\oplus \overset{\uparrow}{\ominus} P_2 A_3 \overline{G}_1$ (4) $\oplus \overset{\uparrow}{\ominus} K_{(5)} \overline{C}_{(5)} A_5 \overline{G}_{(2)}$
124. Which one of the following statements is not correct?
- (1) Each stamen which represents the male reproductive organ consists of a stalk or a filament and an anther.
(2) An actinomorphic flower can be dissected into two equal halves from any plane.
(3) Superior ovary is found in hypogynous flowers.
(4) When stamens are attached to petals, they are epiphyllous as in brinjal.
125. Which of the following statement(s) is/are correct about calyx?
- (1) Calyx is the outermost whorl of the flower and are called sepals.
(2) Sepals are green, leaf like structure and protect the flower in the bud stage.
(3) The calyx may be gamosepalous (sepals free) or polysepalous (sepals united).
(4) Both (1) and (2)
126. Which of the following statement(s) is/are correct about venation?
- (i) The arrangement of veins and the veinlets in the lamina of leaf is called venation.
(ii) Reticulate venation is the characteristic of monocots.
(iii) When the veinlets form a network, the venation is termed as reticulate venation.
(iv) When the veins run parallel to each other within a lamina, the venation is termed as parallel venation.
- (1) Only (i) (2) Both (i) and (ii) (3) (i), (iii) and (iv) (4) All of these
127. Which one of the following are not true for parietal placentation?
- (1) Ovules are borne on central axis.
(2) Ovary is one-chambered but it becomes two-chambered due to the formation of false septum.
(3) Examples are mustard and *Argemone*.
(4) Both (2) and (3)
128. Study the following statements and select the correct option
- (i) Buds are present in the axil of leaflets of the compound leaf.
(ii) Pulvinus leaf-base is present in some leguminous plants.
(iii) In *Alstonia*, the petioles expand, become green and synthesize food.
(iv) Opposite phyllotaxy is seen in guava.
- (1) (ii) and (iv) are correct but (i) and (iii) are incorrect.
(2) (i) and (iii) are correct but (ii) and (iv) are incorrect.
(3) (i) and (iv) are correct but (ii) and (iii) are incorrect.
(4) (ii), (iii) and (iv) are correct but (i) is incorrect.
129. Which of the following statements are correct?
- (i) From the region of elongation, some of the epidermal cells form root hairs.
(ii) Pneumatophores are seen in *Rhizophora*.
(iii) Adventitious roots are seen in the banyan tree.
(iv) Maize and sugarcane have prop roots.
- (1) (i) and (iv) (2) (i), (iii) and (iv) (3) (iii) and (iv) (4) (ii) and (iii)

130. Which of the following statement (s) is/are not correct?
- Calyx and corolla are reproductive organs of a flower.
 - Zygomorphic flower can be divided into two equal radial halves in any radial plane.
 - Flowers without bracts are termed as bracteate.
 - Parthenocarpic fruit is formed after fertilization of the ovary.
 - In legumes, seed is non-endospermic.
 - Castor is an endospermous seed.
- (1) (i) , (ii), (iii) and (iv) (2) (i), (ii) and (v)
 (3) (iii), (iv) and (vi) (4) (iv), (v) and (i)
131. Which of the following statement(s) is /are correct?
- Many plants belonging to the family fabaceae are good ornamentals (*Tulip*, *Gloriosa*), source of medicine (*Aloe*) and vegetables (*Asparagus*).
 - The plumule and radicle are enclosed in sheaths which are called coleorhiza and coleoptile respectively.
 - A flower having either stamens or carpels is unisexual.
 - Basal, alternate, linear, exstipulate with parallel venation types of leaves is found in the family liliaceae.
- (1) Only (i) (2) Both (i) and (ii) (3) Both (iii) and (iv) (4) All of these
132. Which of the following statements is correct?
- Imbricate aestivation is found in the papilionaceous family.
 - Generally, sepals are green, leaf like and protect the flowers in the bud stage.
 - In cymose type of inflorescence, the main axis terminates in a flower, hence is limitless in growth.
 - In axile placentation ovary is one chambered but it becomes two chambered due to the formation of false septum.
- (1) Only (1) (2) Both (1) and (2) (3) Both (3) and (4) (4) All of these
133. Assertion : A simple leaf has undivided lamina.
 Reason : Leaves showing pinnate and palmate venations have various type of incisions.
- If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
 - If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
 - If Assertion is true but Reason is false.
 - If both Assertion and Reason are false.
134. Assertion : Ginger has a prostrate-growing rhizome.
 Reason : Shoot growth is not effected by gravity.
- If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
 - If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
 - If Assertion is true but Reason is false.
 - If both Assertion and Reason are false.
135. Assertion : Many plants are propagated vegetatively even though they bear seeds.
 Reason : Potatoes multiply by tubers, apple by cutting etc.
- If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
 - If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
 - If Assertion is true but Reason is false.
 - If both Assertion and Reason are false.

SECTION-B

136. Assertion : In fabaceae family monocarpellary, unilocular ovary is present.
Reason : In fabaceae, placentation is parietal.
- (1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
 - (2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
 - (3) If Assertion is true but Reason is false.
 - (4) If both Assertion and Reason are false.
137. Assertion : In Australian Acacia leaf modified to perform photosynthesis.
Reason : In dicots, pericycle has the capacity to produce lateral roots.
- (1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
 - (2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
 - (3) If Assertion is true but Reason is false.
 - (4) If both Assertion and Reason are false.
138. Match the following stem modifications given in column I with their examples given in column II and select the correct combination from the options given below.

Column -I		Column -II	
(Stem Modification)		(Found in)	
A.	Underground stem	I.	Euphorbia
B.	Stem tendrils	II.	Opuntia
C.	Stem thorns	III.	Potato
D.	Flattened stem	IV.	Citrus
E.	Fleshy cylindrical stem	V.	Cucumber

- (1) A - I, B - II, C - III, D - V, E - IV
 - (2) A - II, B - III, C - IV, D - V, E - I
 - (3) A - III, B - IV, C - V, D - I, E - II
 - (4) A - III, B - V, C - IV, D - II, E - I
139. Match the androecium formula (given in column II) with their family (given in column I) and choose the correct combination from the options given below.

**Column-I
(Family)**

- Brassicaceae
- Fabaceae
- Solanaceae
- Liliaceae

**Column-II
(Androecium formula)**

- A_{3+3}
- $A_{(5)}$
- $A_{(9)+1}$
- A_{2+4}

- (1) A - IV; B - III; C - II; D - I
 - (2) A - I; B - II; C - III; D - IV
 - (3) A - II; B - III; C - IV; D - I
 - (4) A - III; B - IV; C - I; D - II
140. Match column I with column II and choose the correct option.

Column-I

- Bud in the axile of leaf
- Outer layer of seed coat
- Spines (modified leaves)
- Leaves modified to catch insects
- Fleshy leaves with stored food

Column-II

- Pitcher plant
- Cacti
- Testa
- Simple leaf
- Garlic and onion

- (1) A - I, B - II, C - III, D - IV, E - V
- (2) A - V, B - IV, C - III, D - II, E - I
- (3) A - IV, B - III, C - II, D - I, E - V
- (4) A - IV, B - II, C - III, D - I, E - V

141. Match column-I with column-II and choose the correct option.

Column-I**(Members of Fabaceae)**

- A. Gram, sem, moong,soyabean
 B. Soyabean,groundnut
 C. Indigofera
 D. Sunhemp
 E. Sesbania, Trifolium
 F. Lupin, sweet potato
 G. Muliathi

Column-II**(Economic importance)**

- I. Medicine
 II. Ornamental
 III. Fodder
 IV. Fibres
 V. Dye
 VI. Edible oil
 VII. Pulses

- (1) A - I, B - II, C - III, D - IV, E - V, F - VI, G - VII
 (2) A - VII, B - VI, C - V, D - IV, E - III, F - II, G - I
 (3) A - II, B - IV, C - VI, D - I, E - III, F - V, G - VII
 (4) A - I, B - III, C - V, D - VII, E - II, F - IV, G - VI

142. Match the column I with column II and choose the correct option.

Column I

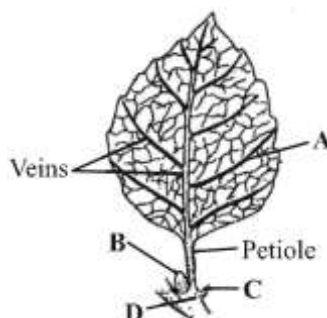
- A. Placentation
 B. Aestivation
 C. Inflorescence
 D. Flower

Column II

- (i) Arrangement of flowers on the rachis
 (ii) Modified shoot for sexual reproduction
 (iii) Arrangement of various whorls in the bud
 (iv) Arrangement of ovules within an ovary

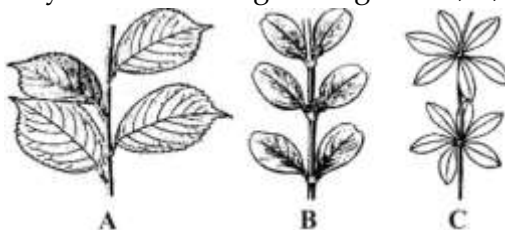
- | A | B | C | D |
|-----------|----------|----------|----------|
| (1) (i) | (ii) | (iii) | (iv) |
| (2) (iii) | (i) | (ii) | (iv) |
| (3) (iii) | (i) | (iv) | (ii) |
| (4) (iv) | (iii) | (i) | (ii) |

143. Which of the following option shows the correct labelling of the parts of leaf marked as A, B, C and D.



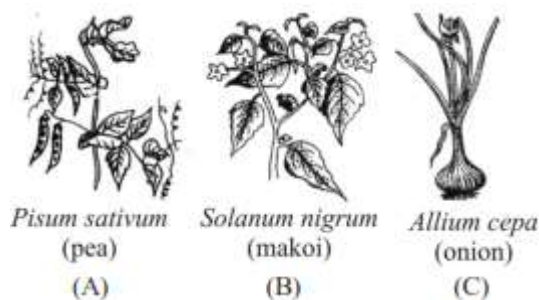
- | A | B | C | D |
|-------------|--------------|--------------|-----------|
| (1) Lamina | Axillary bud | Stipule | Leaf base |
| (2) Lamina | Stipule | Axillary bud | Leaf base |
| (3) Lamina | Axillary bud | Stipule | Pedicel |
| (4) Leaflet | Axillary bud | Stipule | Leaf base |

144. Identify the kind of phyllotaxy shown in the given figures A, B, and C.



- (1) A-Alternate, B - Opposite, C - Whorled
 (2) A- Whorled, B - Opposite, C -Alternate
 (3) A-Alternate, B - Whorled, C - Opposite
 (4) A-Whorled, B -Alternate, C - Opposite

145. Identify the correct families of the given plant species (A, B and C)



- (1) A - Liliaceae, B - Compositae, C - Malvaceae
 (2) A - Fabaceae, B - Solanaceae, C - Liliaceae
 (3) A - Compositae, B - Malvaceae, C - Liliaceae
 (4) A - Solanaceae, B - Fabaceae, C - Liliaceae
146. Aleurone layer helps in
 (1) storage of food in endosperm. (2) protection of embryo.
 (3) utilization of stored food. (4) all of the above.
147. Fibrous root system is better adopted than tap root system for
 (1) transport of organic matter. (2) absorption of water and minerals.
 (3) storage of food. (4) anchorage of plant to soil.
148. Which is not a stem modification ?
 (1) Rhizome of ginger (2) Corm of *Colocasia*
 (3) Pitcher of *Nepenthes* (4) Tuber of potato
149. The character of flower which is represented by floral formula but not by floral diagram is
 (1) aestivation
 (2) placentation
 (3) position of gynoecium
 (4) adhesion of stamen
150. Which of the following represents the floral characters of liliaceae?
 (1) Six tepals, zygomorphic, six stamens, bilocular ovary, axile placentation.
 (2) Actinomorphic, polyphyllous, unilocular ovary, axile placentation.
 (3) Tricarpellary, actinomorphic, polyandrous, superior ovary, axile placentation.
 (4) Bisexual, zygomorphic, gamophyllous, inferior ovary, marginal placentation.