

Morphology of Flowering Plants

NEET previous year questions · Biology

10 questions from the official papers: NEET 2026 (4), Re-NEET 2026 (3), NEET 2020 (3). Each is followed by its answer and a worked solution written by BrainIt. Generated on 23 October 2026.



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1. NEET 2026 · Q91

In angiosperms, root hairs arise from which one of the following regions of the root?

- (1) The root cap zone
- (2) The region of meristematic activity
- (3) The region of elongation
- (4) The region of maturation

Answer (4)

Sol. Root hairs are fine, thread-like unicellular outgrowths of epidermal cells that develop in the region of maturation (differentiation), where cells have fully elongated and differentiated. Hence option (4) is correct. The root cap, meristematic zone and elongation zone lie nearer the root tip than this region and do not bear root hairs.

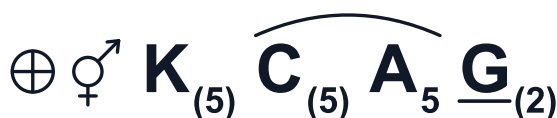
2. NEET 2026 · Q118

Which of the following floral formula is the correct floral formula of the Solanaceae family?

- (1) $\oplus \text{ } \overline{\text{K}_{(5)} \text{C}_{(5)} \text{A}_5 \underline{\text{G}}_{(2)}}$
- (2) $\oplus \text{ } \overline{\text{K}_{(5)} \text{C}_{(5)} \text{A}_5 \underline{\text{G}}_{(2)}}$
- (3) $\oplus \text{ } \overline{\text{K}_5 \text{C}_5 \text{A}_5 \underline{\text{G}}_{(2)}}$
- (4) $\oplus \text{ } \overline{\text{K}_5 \text{C}_{(5)} \text{A}_5 \underline{\text{G}}_{(2)}}$

Answer (2)

Sol. Solanaceae flowers are actinomorphic ($\oplus$) and bisexual ($\overline{\text{K}}$) with a gamosepalous calyx $\text{K}_{(5)}$, a gamopetalous corolla $\text{C}_{(5)}$, five epipetalous stamens A_5 (the arc linking corolla to androecium shows stamens attached to the corolla) and a bicarpellary, syncarpous, superior ovary $\text{G}_{(2)}$. Only option (2) shows both the fused calyx/corolla and the epipetalous condition, so it is the correct floral formula.



3. NEET 2026 · Q121

In racemose inflorescence, _____.

- (1) The main axis terminates in a flower
- (2) Flowers are solitary
- (3) The growth is limited
- (4) Flowers are borne in an acropetal succession

Answer (4)

Sol. In a racemose inflorescence the main axis keeps growing (unlimited growth) and does not end in a flower; the flowers are borne laterally in acropetal succession, with older flowers at the base and younger ones toward the tip. Termination of the main axis in a flower and limited growth are features of the cymose inflorescence.

4. NEET 2026 · Q131

Match List I with List II :

List I (Placentation)	List II (Example)
P) Marginal	I) Mustard
Q) Axile	II) Pea
R) Parietal	III) Marigold
S) Basal	IV) Lemon

Choose the correct answer from the options given below:

- (1) P-II, Q-IV, R-I, S-III
- (2) P-I, Q-III, R-II, S-IV
- (3) P-III, Q-I, R-IV, S-II
- (4) P-IV, Q-II, R-I, S-III

Answer (1)

Sol. Marginal placentation is seen in pea (P-II), axile in lemon/citrus (Q-IV), parietal in mustard (R-I), and basal in marigold (S-III). This yields P-II, Q-IV, R-I, S-III.

5. Re-NEET 2026 · Q105

Phyllotaxy is the pattern of arrangement of _____.

- (1) leaves (2) flowers (3) fruits (4) sepals

Answer (1)

Sol. Phyllotaxy is the arrangement of LEAVES on the stem or branch, and it comes in three patterns: alternate (as in china rose), opposite (as in *Calotropis*) and whorled (as in *Alstonia*). The Greek root phyllon means leaf. The arrangement of flowers on the floral axis is called inflorescence, a separate term. NCERT Class 11, Morphology of Flowering Plants.

6. Re-NEET 2026 · Q113

Which of the following are characteristic features of Solanaceae family?

Statement I: Flowers are bisexual and actinomorphic
Statement II: Calyx have five sepals and are united
Statement III: Androecium have five stamens and are epipetalous
Statement IV: Ovary is inferior

Choose the correct answer from the options given below :

- (1) (I), (II) and (III) only
(2) (IV) only
(3) (I) and (II) only
(4) (II), (III) and (IV) only

Answer (1)

Sol. The Solanaceae floral formula describes bisexual, actinomorphic flowers with a gamosepalous calyx of five united sepals, a gamopetalous corolla of five petals, and five epipetalous stamens attached to the corolla tube. Statement IV is the odd one out: the ovary in this family is bicarpellary, syncarpous and SUPERIOR, seated above the other floral parts. NCERT Class 11, Morphology of Flowering Plants.

7. Re-NEET 2026 · Q120

Match List-I with List-II.

List I	List II
P) Marginal placentation	I) <i>Argemone</i>
Q) Axile placentation	II) Tomato
R) Parietal placentation	III) Primrose
S) Free central placentation	IV) Pea

Choose the correct answer from the options given below :

- (1) P-II, Q-IV, R-I, S-III (2) P-IV, Q-II, R-III, S-I
(3) P-IV, Q-III, R-I, S-II (4) P-IV, Q-II, R-I, S-III

Answer (4)

Sol. Placentation describes where ovules attach inside the ovary. Marginal placentation has a single ridge along the ventral suture of a monocarpellary ovary, as in pea (P-IV). Axile placentation occurs in multilocular ovaries where the placenta is axial, as in tomato (Q-II). Parietal placentation puts the ovules on the inner ovary wall of a one-chambered ovary, as in *Argemone* (R-I). Free central placentation has ovules on a central axis with no septa, as in primrose (S-III). NCERT Class 11, Morphology of Flowering Plants.

8. NEET 2020 · Q29

The roots that originate from the base of the stem are

- (1) Primary roots (2) Prop roots
(3) Lateral roots (4) Fibrous roots

Answer (4)

Sol. Roots arising in clusters from the base of the stem replace the short-lived primary root and form a fibrous root system, as in grasses. Chapter: Morphology of Flowering Plants.

9. NEET 2020 · Q36

Ray florets have

- (1) Superior ovary (2) Hypogynous ovary
(3) Half inferior ovary (4) Inferior ovary

Answer (4)

Sol. Ray florets of Asteraceae are epigynous; the other floral whorls arise above the ovary, so the ovary is inferior. Chapter: Morphology of Flowering Plants.

10. NEET 2020 · Q71

The ovary is half inferior in :

- (1) Mustard (2) Sunflower
(3) Plum (4) Brinjal

Answer (3)

Sol. Plum has a perigynous flower and a half-inferior ovary. Mustard, sunflower and brinjal have superior or inferior ovaries rather than the half-inferior condition asked here. Chapter: Morphology of Flowering Plants.

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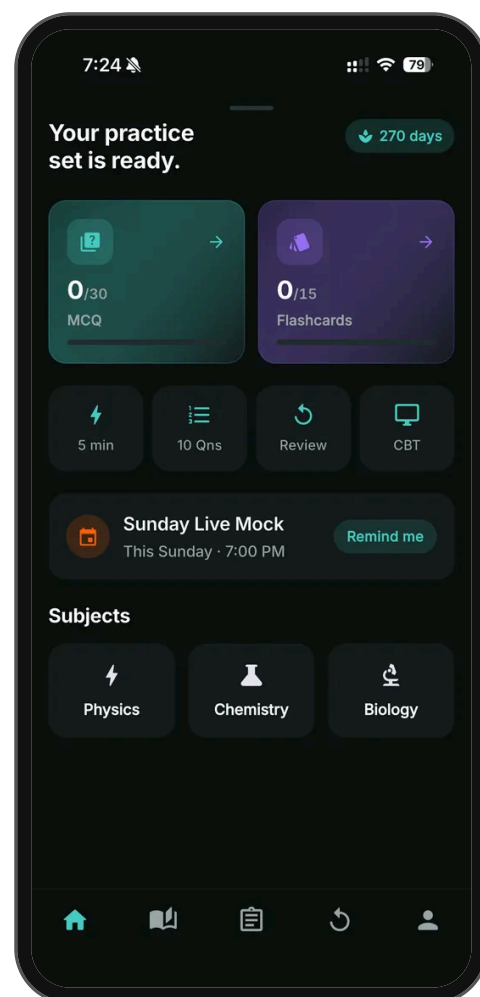
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