

Morphology of Flowering Plants — CBSE Pattern Test 1

Class 11 Biology · 90 minutes · 40 marks · Sections A–D with answer key · Narayan Gurukul Academy

Test 1 — CBSE Pattern (90 minutes, 40 marks)

Class 11 Biology · Morphology of Flowering Plants · Narayan Gurukul Academy (ClassApna)

General Instructions: (1) This paper has four sections — Section A (1×10), Section B (2×4), Section C (3×4) and Section D (5×2) — total 40 marks. Time allowed: 90 minutes.
(2) All questions are compulsory. No overall choice is given; internal choice, where allowed, is clearly marked.
(3) For MCQ questions choose the single correct option; for VSA answers write a single line.
(4) Take $g = 10 \text{ m/s}^2$. All symbols carry their usual meaning. Use of a calculator is not permitted.

Section A — MCQ & VSA ($10 \times 1 = 10$ marks)

- The root system that develops from the radicle is the
 - tap root system
 - fibrous root system
 - adventitious system
 - aerial system
- The stem develops from the
 - plumule
 - radicle
 - cotyledon
 - root cap
- The flat green part of the leaf is the
 - lamina
 - petiole
 - stipule
 - vein
- Reticulate venation is characteristic of
 - dicots
 - monocots
 - bryophytes
 - gymnosperms
- The outermost whorl of the flower is the
 - calyx
 - corolla
 - androecium
 - gynoecium
- The male reproductive whorl is the
 - androecium
 - gynoecium
 - corolla
 - calyx
- The fruit develops from the
 - ovary

- (B) ovule
 - (C) stamen
 - (D) sepal
8. The seed develops from the
- (A) ovule
 - (B) ovary
 - (C) stigma
 - (D) style
9. What is a tap root system?
10. What is a node?

Section B — Short Answer I ($4 \times 2 = 8$ marks)

11. What are pneumatophores?
12. What is a tendril?
13. What is phyllotaxy?
14. What is placentation?

Section C — Short Answer II ($4 \times 3 = 12$ marks)

15. Distinguish between tap root and fibrous root systems.
16. Distinguish between reticulate and parallel venation.
17. Distinguish between a complete and an incomplete flower.
18. Distinguish between a true fruit and a false fruit.

Section D — Long Answers ($2 \times 5 = 10$ marks)

19. (a) Describe the regions of a root. (b) Describe the parts of a typical leaf.
20. (a) Describe the parts of a typical flower. (b) Explain the types of placentation with examples.

Answer Key (Marking Scheme)

- Q1 — (A) tap root system. Q2 — (A) plumule. Q3 — (A) lamina. Q4 — (A) dicots. Q5 — (A) calyx. Q6 — (A) androecium. Q7 — (A) ovary. Q8 — (A) ovule.
- Q9 — A tap root system develops from the radicle and has one main root with lateral branches.
- Q10 — A node is the point on the stem where leaves arise.
- Q11 — Pneumatophores are breathing roots of mangrove plants.
- Q12 — A tendril is a thread-like modified stem or leaf used for climbing.
- Q13 — Phyllotaxy is the pattern of arrangement of leaves on the stem.
- Q14 — Placentation is the arrangement of ovules within the ovary.
- Q15 — Tap root develops from the radicle (pea); fibrous root is a cluster of equal roots (grass).
- Q16 — Reticulate: network of veins (dicots); parallel: veins run parallel (monocots).
- Q17 — A complete flower has all four whorls; an incomplete flower lacks one or more.
- Q18 — True fruit develops only from the ovary (mango); false fruit also from other floral parts (apple).

Q19 — (a) Root cap, region of meristematic activity, region of elongation, region of maturation. (b) Leaf base, petiole and lamina (with veins).

Q20 — (a) Calyx, corolla, androecium and gynoecium. (b) Marginal (pea), axile (tomato), parietal (mustard), free central (Dianthus), basal (sunflower).