

Morphology of Flowering Plants — CBSE Pattern Test 2

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

Test 2 — 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)

- Roots that arise from parts other than the radicle are
 - adventitious roots
 - tap roots
 - primary roots
 - lateral roots
- Underground stems are seen in
 - potato and ginger
 - pea and bean
 - carrot and radish
 - none of these
- The arrangement of veins in a leaf is called
 - venation
 - phyllotaxy
 - aestivation
 - plication
- The flower is a modified
 - shoot
 - root
 - leaf
 - stem branch
- The arrangement of ovules within the ovary is
 - placentation
 - aestivation
 - phyllotaxy
 - vernation
- A fruit formed without fertilisation is
 - parthenocarpic
 - aggregate
 - false
 - composite
- Fabaceae is characterised by
 - legume fruit

- (B) capsule fruit
 - (C) siliqua
 - (D) follicle
8. Solanaceae includes
- (A) tomato and potato
 - (B) pea and bean
 - (C) onion and garlic
 - (D) wheat and rice
9. What is the lamina?
10. What is the androecium?

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

11. Name one insectivorous plant.
12. What is a complete flower?
13. What is parthenocarpy?
14. Name the family of pea.

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

15. State two functions of the stem.
16. What is a compound leaf?
17. What is the difference between aestivation and placentation?
18. What is the difference between monocot and dicot seeds?

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

19. (a) Explain the modifications of roots for storage and support. (b) Describe the structure of a typical seed.
20. (a) Describe the floral characters of the family Fabaceae. (b) Describe the floral characters of the family Solanaceae and Liliaceae.

Answer Key (Marking Scheme)

- Q1 — (A) adventitious roots. Q2 — (A) potato and ginger. Q3 — (A) venation. Q4 — (A) shoot. Q5 — (A) placentation. Q6 — (A) parthenocarpic. Q7 — (A) legume fruit. Q8 — (A) tomato and potato.
- Q9 — The lamina is the flat, green, expanded part of the leaf.
- Q10 — The androecium is the male reproductive whorl, made of stamens.
- Q11 — Pitcher plant (or Venus flytrap).
- Q12 — A complete flower has all four whorls (calyx, corolla, androecium, gynoecium).
- Q13 — Parthenocarpy is the formation of fruit without fertilisation.
- Q14 — Fabaceae.
- Q15 — Supports the plant parts and conducts water, minerals and food.
- Q16 — A compound leaf has its lamina divided into leaflets on a common petiole (e.g. neem).
- Q17 — Aestivation: arrangement of sepals/petals in the bud; placentation: arrangement of ovules in the ovary.
- Q18 — Monocot seeds have one cotyledon (maize); dicot seeds have two (bean).

Q19 — (a) Storage: fusiform (radish), conical (carrot), tuberous (sweet potato); support: prop roots (banyan), stilt roots (sugarcane). (b) Seed coat (testa and tegmen), embryo (radicle and plumule) and endosperm/cotyledons.

Q20 — (a) Fabaceae: $\ast K(5) C1+2+(2) A(9)+1 G1$, papilionaceous corolla, legume fruit. (b) Solanaceae: actinomorphic, $K(5) C(5) A5 G(2)$; Liliaceae: usually superior ovary, capsule/berry fruit.