

QB365 Question Paper Software
11th Standard - Biology

Morphology of Flowering Plants Assertion and reason

Exam Time: 00:20 Hrs

Date: 2025-10-10

Total Marks: 10

Questions:

Assertion and reason

1. **Assertion** : Apical meristem of root is subterminal.

Reason : At the terminal end of root, root cap is present.

Codes:

- (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
- (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- (c) If Assertion is true but Reason is false.
- (d) If both Assertion and Reason are false.

2. **Assertion:** Momordica roots look like necklace.

Reason: Momordica possess moniliform roots.

Codes:

- (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
- (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- (c) If Assertion is true but Reason is false.
- (d) If both Assertion and Reason are false.

3. **Assertion:** Roots contain nodes but no leaves or buds.

Reason: Root branches arise endogenously.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

4. **Assertion:** Runners are underground stem.

Reason: Runners bear node and internodes.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

5.**Assertion:** Succulents leaves are found in xerophytic habitats.

Reason: Succulents leaves store water and have sunken stomata.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

6.**Assertion:** Heterophylly is seen in many aquatic plants.

Reason : Aquatic plants survive in two different conditions of the environment.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

7.**Assertion:** Mint leaves give off the strong odour.

Reason: Glandular hairs of mint leaves secrete oil.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

8.**Assertion:** Spathe, a bract of spadix attracts pollinators.

Reason: Spathe is often brightly coloured.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

9.**Assertion:** Compound umbel is branched.

Reason: In compound umbel, both involucre and involucels are present.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion

- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

10. **Assertion:** Verticillaster is a cymose inflorescence.

Reason: The main axis and lateral branches of inflorescence end in flowers.

Codes:

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false
- E) If the assertion is false but reason is true

Answers Key:

Assertion and reason

1. (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

Explanation:

Root cap is the terminal part of root.

2. (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

Explanation:

Moniliform or beaded roots are swollen at regular intervals like beads of a necklace. Hence, the roots have the appearance of necklace. Such roots are found in *Discorealata*, *Momordica charauter* etc.

3. E) If the assertion is false but reason is true

Explanation:

Root is typically a non green underground cylindrical structure forming the descending axis of the plant which gives rise to endogenous branches and does not possess nodes, leaves or buds. Presence of nodes and internode is the characteristic feature of stems

4. E) If the assertion is false but reason is true

Explanation:

Runners are special narrow, green, above ground horizontal or prostrate branches which develop at the base of erect shoots called crowns. Each runner has generally one or more nodes. The nodes bear scale leaves and axillary buds.

5. A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

Explanation:

Succulent leaves are fleshy or swollen. They store water, mucilage or food materials. Succulent leaves occur in plains of saline and xerophytic habitats, e.g., Aloe, Agave, Bryophyllum, Portulaca. These plants possess a water tissue, which consists of turgescient parenchyma cells with delicate cellulose walls, thin peripheral layers of cytoplasm and few or no chloroplasts.

6. A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

Explanation:

Heterophylly is met with in many aquatic plants, particularly in those growing in shallow

running water. Here the floating or aerial leaves and the submerged leaves are of different kinds; the former are generally broad, more or less fully expanded and undivided or merely lobed; while the latter are narrow, ribbon-shaped, linear or much dissected. Examples are *Sagittaria*, *Ranunculus aquatilis*, *Limnophila heterophylla*.

7. A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

Explanation:

Mint leaves give off the strong odours. This odours are due to volatile oils secreted by the terminal cells of glandular hair on the leaves.

8. A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

Explanation:

The spadix contains a large green or coloured bract called spathe. For example, in banana and aroids, the brightly coloured spathe attracts insects to facilitate pollination.

9. B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion

Explanation:

Compound umbel is branched umbel, where several small or daughter umbels arise from a common point in an umbellate fashion. A whorl of bracts, called involucre is present at the base of the daughter umbels are called involucels.

10. A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

Explanation:

Cymose inflorescence is the name of determinate or definite inflorescence in which the tip of the main axis terminates in a flower and further growth continues by one more lateral branches which also behave like the main axis. Verticillaster is a special form of cymose inflorescence. The first axis ends in a flower, it bears two lateral branches, each ending in a flower, succeeding lateral branches are produced in an alternating manner.