

Chapter – 13 | Plant Growth and Development

QUIZ-01

1. Growth in plants is defined as:

- A. Temporary increase in water content
- B. Irreversible permanent increase in size
- C. Movement towards light
- D. Loss of leaves

(B)

Explanation : Growth means an irreversible and permanent increase in the size of an organ, its parts, or an individual cell.

2. Plant growth is generally indeterminate due to the presence of:

- A. Xylem
- B. Phloem
- C. Meristems
- D. Stomata

(C)

Explanation : Meristems retain the capacity to divide and add new cells throughout the life of the plant.

3. Primary growth in plants is mainly caused by:

- A. Apical meristems
- B. Cork cambium only
- C. Vascular cambium only
- D. Mature parenchyma

(A)

Explanation : Root apical meristem and shoot apical meristem mainly cause elongation and primary growth.

4. The three phases of growth are:

- A. Lag, log and stationary
- B. Meristematic, elongation and maturation
- C. Germination, flowering and fruiting
- D. Differentiation, dedifferentiation and death

(B)

Explanation : Growth is generally divided into meristematic, elongation and maturation phases.

5. A sigmoid growth curve is generally associated with:

- A. Geometric growth
- B. Arithmetic growth
- C. No growth
- D. Only cell death

(A)

Explanation : Geometric growth shows lag, exponential and stationary phases, producing an S-shaped sigmoid curve.

6. The ability of plants to form different structures in response to environment or life phase is called:

- A. Dormancy
- B. Plasticity
- C. Senescence
- D. Abscission

(B)

Explanation : Plasticity allows plants to show different forms, such as heterophylly in larkspur and buttercup.

7. Regaining the capacity to divide by living differentiated cells is called:

- A. Differentiation
- B. Dedifferentiation
- C. Redifferentiation
- D. Maturation

(B)

Explanation : Dedifferentiation occurs when mature living cells regain the ability to divide under certain conditions.

8. Which plant growth regulator helps initiate rooting in stem cuttings?

- A. Auxin
- B. Ethylene
- C. ABA
- D. Cytokinin

(A)

Explanation : Auxins are widely used to initiate rooting in stem cuttings during plant propagation.

9. Bolting in rosette plants is promoted by:

- A. Abscissic acid
- B. Gibberellins
- C. Ethylene
- D. 2,4-D

(B)

Explanation : Gibberellins promote bolting, which is internode elongation just before flowering.

10. ABA is called stress hormone because it:

- A. Promotes fruit ripening
- B. Stimulates stomatal closure and stress tolerance
- C. Promotes apical dominance
- D. Increases sugarcane stem length

(B)

Explanation : Abscissic acid helps plants tolerate stress by inducing stomatal closure and dormancy-related responses.