

Chapter – 13 | Plant growth and Development

QUIZ
PART-04

1. Differentiation means —

- A. Mature cells become specialized for specific functions
- B. Cells lose all functions
- C. Seeds stop germinating
- D. Leaves fall due to season (A)

Explanation : Cells from meristems mature and modify to perform special functions.

2. Tracheids and vessels help in —

- A. Transport of water and minerals
- B. Flower colour formation
- C. Seed dormancy only
- D. Fruit ripening only (A)

Explanation : Tracheary elements conduct water and minerals.

3. Fully differentiated tracheary elements are —

- A. Dead and hollow
- B. Always green
- C. Full of chlorophyll
- D. Soft and living forever (A)

Explanation : Tracheids and vessels become dead and hollow after complete differentiation.

4. Dedifferentiation is the ability of differentiated cells to —

- A. Regain power of division
- B. Stop metabolism forever
- C. Become seeds directly
- D. Lose water permanently (A)

Explanation : Some living differentiated cells become meristematic again under special conditions.

5. Formation of vascular cambium and cork cambium from parenchyma is an example of —

- A. Differentiation
- B. Dedifferentiation
- C. Germination
- D. Senescence (B)

Explanation : Parenchyma cells regain division ability to form cambium.

6. Redifferentiation means —

- A. Dedifferentiated cells again lose division ability and perform special functions
- B. Cells become zygotes
- C. Seeds become dormant
- D. Cells stop respiration (A)

Explanation : Cells formed from cambium may become secondary xylem or phloem.

7. Secondary xylem and secondary phloem are examples of —

- A. Redifferentiation
- B. Pollination
- C. Dormancy
- D. Plasticity only (A)

Explanation : Cambial cells form secondary tissues after redifferentiation.

8. Development includes all changes from —

- A. Seed germination to senescence
- B. Flowering to fruiting only
- C. Root hair to xylem only
- D. Leaf fall to seed drying only (A)

Explanation : Development covers the whole life cycle of a plant.

9. Plasticity is the ability of plants to —

- A. Form different structures in response to environment or life stage
- B. Stop growth permanently
- C. Absorb only oxygen
- D. Produce only one leaf shape (A)

Explanation : Plants show different pathways under environmental influence.

10. Heterophylly in buttercup is an example of —

- A. Plasticity
- B. Fermentation
- C. Respiration
- D. Abscission only (A)

Explanation : Buttercup forms different leaf shapes in water and air due to plasticity.