CLASS XI CH-13 BIO

MCQ Set 4

1. The sum of growth and differentiation is known as:
a) Dedifferentiation
b) Development
c) Redifferentiation
d) Plasticity

2. The growth in plants is said to be 'open' because:
a) They grow towards light
b) New cells are always being added by meristems
c) Their growth is limited
d) They have a short life span

3. The phase of growth where cells have abundant plasmodesmatal connections is:
a) Maturation
b) Elongation
c) Meristematic
d) Senescence

4. In geometrical growth, the stationary phase occurs due to:
a) Unlimited nutrients
b) Limited nutrients
c) The start of cell division
d) The end of cell differentiation

5. The absolute growth rate is the measurement of:
a) Growth per unit time per initial size
b) Total growth per unit time
c) The efficiency of growth
d) The rate of differentiation

6. Which of the following is an essential element for growth?
a) Carbon Dioxide
b) Nitrogen
c) Water
d) All of the above

7. The act leading to maturation of cells to perform specific functions is:
a) Dedifferentiation
b) Redifferentiation
c) Differentiation
d) Development

8. The formation of cork cells from cork cambium is an example of:
a) Differentiation

b) Dedifferentiation
c) Redifferentiation
d) Plasticity

9. The ability of a plant to change its leaf shape based on the environment is an example of:
a) Development
b) Plasticity
c) Differentiation
d) Dormancy

10. Which of the following PGRs is a growth inhibitor?
a) IAA
b) GA
c) Kinetin
d) ABA

11. The PGR that was discovered through experiments on phototropism is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Ethylene

12. The PGR responsible for the 'bakanae' disease is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Ethylene

13. Which synthetic auxin is used as a herbicide?
a) IAA
b) IBA
c) 2,4-D
d) Zeatin

14. Removal of the apical bud results in the growth of lateral buds because it removes the source of:
a) Cytokinins
b) Gibberellins
c) Auxins
d) Abscisic Acid

15. The PGR that can induce parthenocarpy is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Ethylene

16. Gibberellins are used to increase the length of:
a) Roots
b) Grape stalks
c) Leaves
d) Flowers

17. The natural cytokinin isolated from corn-kernels is:
a) Kinetin
b) Zeatin
c) IAA
d) ABA

18. Cytokinins help in the formation of:
a) Root cap
b) Adventitious shoots
c) Tracheary elements
d) Cork

19. Ethylene is known to promote:
a) Apical dominance
b) Leaf senescence and abscission
c) Seed dormancy
d) Root growth inhibition

20. The compound that breaks down to release ethylene is:
a) Kinetin
b) Zeatin
c) Ethephon
d) NAA

21. ABA is known to induce:
a) Cell division
b) Seed dormancy
c) Fruit ripening
d) Flowering

22. The PGR that acts as an antagonist to gibberellins is:
a) Auxin
b) Cytokinin
c) Abscisic Acid
d) Ethylene

23. The PGR that promotes the formation of adventitious roots is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Abscisic Acid

24. The PGR that can break seed dormancy is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Ethylene

25. The PGR that promotes female flowers in cucumbers is:
a) Auxin
b) Gibberellin

c) Cytokinin
d) Ethylene

26. The cells in the meristematic phase have:
a) Thick secondary walls
b) Large vacuoles
c) Dense cytoplasm and prominent nuclei
d) No plasmodesmata

27. The exponential phase in a sigmoid curve is characterized by:
a) Slow growth
b) Rapid growth
c) No growth
d) Death

28. The growth of a leaf is measured by its increase in:
a) Length
b) Surface area
c) Volume
d) Fresh weight

29. The process where a dedifferentiated cell becomes a specialized cell again is:
a) Differentiation
b) Dedifferentiation
c) Redifferentiation
d) Plasticity

30. The development of a plant from a zygote includes:
a) Only growth
b) Only differentiation
c) Both growth and differentiation
d) Only cell division

31. Which of the following is an extrinsic factor for plant growth?
a) Genetic material
b) Plant Growth Regulators
c) Light
d) Hormones

32. The PGR that was discovered as a component of smoke promoting seed germination is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Ethylene

33. The PGR that promotes stomatal closure is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Abscisic Acid

34. The PGR that delays leaf senescence is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Abscisic Acid

35. The growth of a pollen tube is measured by its increase in:
a) Fresh weight
b) Dry weight
c) Length
d) Volume

36. The development of a tracheary element involves:
a) Gain of protoplasm
b) Loss of protoplasm
c) Loss of cell wall
d) Gain of chloroplasts

37. The lag phase in geometrical growth is characterized by:
a) Rapid growth
b) Slow growth
c) No growth
d) Death

38. If the meristem ceases to divide, the plant would:
a) Show uncontrolled growth
b) Die immediately
c) Stop growing in that region
d) Start secondary growth

39. Which PGR is derived from carotenoids?
a) IAA
b) Kinetin
c) ABA
d) Ethylene

40. The PGR that helps overcome apical dominance is:
a) Auxin
b) Gibberellin
c) Cytokinin
d) Abscisic Acid

41. Seed germination requires:
a) Darkness only
b) Favourable conditions
c) Presence of ABA
d) Cold temperature only

42. Cells in the maturation phase are characterized by:
a) Active cell division
b) Maximum vacuolation

c) Primary cell walls only
d) High plasmodesmatal connections

43. Which of the following is a growth inhibitor?
a) IAA
b) GA3
c) Kinetin
d) ABA

44. The term 'auxin' was coined by:
a) Charles Darwin
b) F.W. Went
c) E. Kurosawa
d) F. Skoog

45. The 'bakanae' disease of rice is caused by a fungus that produces:
a) Auxins
b) Gibberellins
c) Cytokinins
d) Ethylene

46. Which PGR promotes nutrient mobilization and delays leaf senescence?
a) Auxin
b) Gibberellin
c) Cytokinin
d) Abscisic Acid

47. Ethylene is NOT involved in:
a) Fruit ripening
b) Apical hook formation in dicots
c) Promoting seed dormancy
d) Root hair formation

48. A plant growth regulator that is a gas at room temperature is:
a) IAA
b) ABA
c) Ethylene
d) GA3

49. The ability of a single maize root apical meristem to produce over 17,500 cells per hour is an example of growth as an increase in:
a) Cell size
b) Cell number
c) Fresh weight
d) Volume

50. The development of a plant from a zygote follows a:
a) Random and unordered process
b) Precise and highly ordered succession of events
c) Process controlled only by external factors
d) Process that does not involve differentiation

Answer Key for Set 4

1. b) Development
2. b) New cells are always being added by meristems
3. c) Meristematic
4. b) Limited nutrients
5. b) Total growth per unit time
6. d) All of the above
7. c) Differentiation
8. c) Redifferentiation
9. b) Plasticity
10. d) ABA
11. a) Auxin
12. b) Gibberellin
13. c) 2,4-D
14. c) Auxins
15. a) Auxin
16. b) Grape stalks
17. b) Zeatin
18. b) Adventitious shoots
19. b) Leaf senescence and abscission
20. c) Ethephon
21. b) Seed dormancy
22. c) Abscisic Acid
23. a) Auxin
24. d) Ethylene
25. d) Ethylene
26. c) Dense cytoplasm and prominent nuclei
27. b) Rapid growth
28. b) Surface area
29. c) Redifferentiation
30. c) Both growth and differentiation
31. c) Light
32. d) Ethylene
33. d) Abscisic Acid
34. c) Cytokinin
35. c) Length
36. b) Loss of protoplasm
37. b) Slow growth
38. c) Stop growing in that region
39. c) ABA
40. c) Cytokinin
41. b) Favourable conditions
42. b) Maximum vacuolation
43. d) ABA
44. b) F.W. Went
45. b) Gibberellins
46. c) Cytokinin
47. c) Promoting seed dormancy

48. c) Ethylene
49. b) Cell number
50. b) Precise and highly ordered succession of events