CLASS XI BIO CH:6

Set 3 – Anatomy of Flowering Plants

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1. Which of the following is a feature of apical meristem?
A) Actively dividing cells at growing tips
B) Secondary thickening
C) Dead and lignified cells
D) Non-dividing parenchyma

2. The function of lateral meristem is —
A) Increase in girth
B) Increase in length
C) Formation of flowers
D) Secondary thickening of leaves

3. Intercalary meristem is absent in —
A) Dicot stem
B) Monocot stem
C) Grass internodes
D) Bamboo

4. Cork cambium arises from —
A) Outer cortical cells
B) Endodermis
C) Pericycle
D) Phloem

5. Which meristematic tissue causes secondary growth?
A) Lateral meristem
B) Apical meristem
C) Intercalary meristem
D) Secondary phloem

6. Cells of collenchyma have thickening due to deposition of —
A) Cellulose and pectin
B) Lignin
C) Suberin
D) Cutin

7. Which plant tissue provides flexibility to plants?
A) Collenchyma
B) Parenchyma
C) Sclerenchyma
D) Xylem

8. The chief mechanical tissue of mature plant organs is —
A) Sclerenchyma

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B) Collenchyma
C) Parenchyma
D) Xylem

9. The chief water-conducting element in angiosperms is —
A) Vessel
B) Tracheid
C) Xylem fibre
D) Xylem parenchyma

10. The sieve tubes are connected through —
A) Sieve plates
B) Pits
C) Plasmodesmata
D) Companion cells

11. Xylem fibres are —
A) Dead sclerenchymatous cells
B) Living parenchyma
C) Collenchymatous cells
D) Dead but unlignified

12. Phloem fibres are —
A) Dead
B) Living
C) Lignified but living
D) Non-lignified and living

13. The cambium responsible for secondary growth is —
A) Lateral meristem
B) Apical meristem
C) Intercalary meristem
D) None

14. Cork cambium cuts cork cells on —
A) Outer side
B) Inner side
C) Both sides
D) Randomly

15. Secondary xylem is formed towards —
A) Centre of stem
B) Periphery
C) Outer cortex
D) Epidermis

16. Secondary phloem is formed towards —
A) Periphery
B) Centre

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C) Pith
D) Endodermis

17. The main function of cork cambium is —
A) Protection
B) Conduction
C) Photosynthesis
D) Transpiration

18. The cambium present between xylem and phloem of a vascular bundle is —
A) Intra-fascicular cambium
B) Inter-fascicular cambium
C) Secondary cambium
D) Cork cambium

19. The cambium formed between two vascular bundles is —
A) Inter-fascicular cambium
B) Intra-fascicular cambium
C) Cork cambium
D) Secondary cambium

20. The term “periderm” includes —
A) Phellogen, phellem, phelloderm
B) Cortex, phloem, cambium
C) Pericycle, endodermis, xylem
D) Cambium, xylem, phloem

21. The pericycle in dicot root gives rise to —
A) Lateral roots
B) Pith
C) Cortex
D) Cambium only

22. The function of endodermis in roots is to —
A) Regulate movement of water
B) Absorb minerals
C) Conduct food
D) Prevent evaporation

23. The outermost layer of the root is called —
A) Epiblema
B) Pericycle
C) Endodermis
D) Cortex

24. Casparian strips are found in —
A) Radial and tangential walls of endodermis
B) Pericycle
C) Cortex
D) Epidermis

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25. Passage cells are —
A) Thin-walled endodermal cells without Casparian strips
B) Xylem vessels
C) Sclerenchyma fibres
D) Collenchyma

26. Protoxylem lies towards centre in —
A) Endarch condition
B) Exarch condition
C) Mesarch condition
D) Centric bundles

27. Metaxylem lies towards periphery in —
A) Endarch condition
B) Exarch condition
C) Amphicribral
D) Amphivasal

28. The vascular bundles in dicot stems are —
A) Open and collateral
B) Closed and scattered
C) Radial
D) Concentric

29. The vascular bundles in monocot stems are —
A) Closed and scattered
B) Open and collateral
C) Concentric
D) Radial

30. Secondary growth does not occur in monocot stem because —
A) Vascular bundles are closed
B) Cambium is present
C) Xylem is absent
D) Phloem is not functional

31. In monocot root, the vascular bundles are —
A) Polyarch
B) Triarch
C) Diarch
D) Tetrarch

32. The endodermis is also known as —
A) Starch sheath
B) Pith
C) Cortex
D) Epiblema

33. The vascular bundles of monocot root are —
A) Polyarch and exarch

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B) Diarch and endarch
C) Triarch and open
D) Tetrarch and open

34. Bulliform cells help in —
A) Folding and unfolding of leaves
B) Photosynthesis
C) Water conduction
D) Food transport

35. The vascular bundles in leaf are called —
A) Veins
B) Medullary rays
C) Cortex
D) Cambium

36. The main function of bundle sheath is —
A) Mechanical support
B) Water absorption
C) Food transport
D) Photosynthesis

37. The differentiation of mesophyll into palisade and spongy layers is seen in —
A) Dicot leaf
B) Monocot leaf
C) Both
D) None

38. In dicot leaf, veins are —
A) Reticulate
B) Parallel
C) Scattered
D) Absent

39. The monocot leaf shows —
A) Parallel venation
B) Reticulate venation
C) Cross venation
D) Spiral venation

40. Xylem parenchyma stores —
A) Starch
B) Lignin
C) Suberin
D) Oil

41. Heartwood differs from sapwood in —
A) Being darker and non-functional
B) Being lighter and functional

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C) Being outer and conducting
D) Containing active vessels

42. Tyloses are outgrowths of —
A) Xylem parenchyma into vessels
B) Phloem into cortex
C) Companion cells
D) Endodermal cells

43. Heartwood is resistant to decay due to —
A) Deposition of tannins, resins and oils
B) Active xylem vessels
C) Lack of lignin
D) Presence of chlorophyll

44. The spring wood is —
A) Light coloured and less dense
B) Dark coloured and dense
C) Hard and compact
D) Rich in tannins

45. Autumn wood is —
A) Darker and denser
B) Lighter and porous
C) Soft and loose
D) Formed during rainy season

46. The annual rings are not distinct in tropical trees because —
A) Climate is uniform throughout the year
B) Cambium is inactive
C) Growth is rapid
D) Cambium is absent

47. The formation of secondary xylem inwards and secondary phloem outwards is called —
A) Secondary growth
B) Apical growth
C) Primary thickening
D) Differentiation

48. The tissue that connects xylem and phloem in a vascular bundle is —
A) Cambium
B) Endodermis
C) Pith
D) Pericycle

49. The ground tissue system in leaves is represented by —
A) Mesophyll
B) Cortex
C) Pith
D) Xylem

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50. The main function of xylem and phloem together is —
A) Conduction of water and food
B) Photosynthesis
C) Storage
D) Growth

✅ Answer Key – Set 3

1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7-A, 8-A, 9-A, 10-A,
11-A, 12-A, 13-A, 14-A, 15-A, 16-A, 17-A, 18-A, 19-A, 20-A,
21-A, 22-A, 23-A, 24-A, 25-A, 26-A, 27-B, 28-A, 29-A, 30-A,
31-A, 32-A, 33-A, 34-A, 35-A, 36-A, 37-A, 38-A, 39-A, 40-A,
41-A, 42-A, 43-A, 44-A, 45-A, 46-A, 47-A, 48-A, 49-A, 50-A.

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