

Note the below:

1. All the questions are compulsory.
2. Draw neat & suitable diagrams wherever necessary.
3. Figures to the right indicate full marks.

Q1. Choose the correct option & rewrite the statements:

(02 Marks each)

1. _____ involves in conduction of organic solute.
a. Xylem b. Phloem c. Parenchyma d. Collenchyma
2. Select Odd one out with respect to xylem
a. Tracheid b. vessels c. Sclerenchyma d. sieve tubes
3. Macrosclereids are also known as _____
a. Bone cells b. Stone cells c. star cells d. Rod cells
4. When the Xylem and Phloem are located on two different radius such type of vascular bundle are known as _____ Vascular bundle
a. radial b. collateral c. Exarch d. Open
5. Sieve Cells are found in _____.
a. Phloem b. Xylem c. Sclerenchyma d. Parenchyma
6. Gaseous exchange occurs through _____.
a. Glandular hair b. Stomata c. T shaped hair d. scales
7. Xylem and phloem are arranged on the same radius; such types of vascular bundles are known as _____.
a. conjoint b. Hexarch c. Endarch d. Closed
8. Radial Vascular bundle occurs in _____.
a. Root b. Stem c. Flower d. leaf
9. _____ is the H₂ donor during photosynthesis.
a. Glucose b. Carbon Dioxide c. Water d. Oxygen
10. _____ is known as structural unit of photosynthesis
a. Mitochondria b. Cytoplasm c. Cell Wall d. Chloroplast
11. The first acceptor of CO₂ in C₃ plants is _____.
a. RuBP b. 3-Phosphoglyceric Acid c. Oxaloacetic Acid d. Malic Acid
12. _____ is an Essential pigment in photosynthesis.
a. Chl. A b. Chl. B c. Xanthophyll d. Carotenoids
13. During non-cyclic photophosphorylation plants produce _____.
a. ATP b. NADPH c. ATP and NADPH d. ADP
14. CAM Stands for _____.
a. Crassulacean acid metabolism b. Carissa acid metabolism
c. Carotenoids acid metabolism d. Central Acid Metabolism
15. NADP is converted into NADPH₂ in _____.
a. Light Reaction b. Dark Reaction c. Carbon Fixation d. Calvin Cycle
16. Where does the light reaction take place?
a. Stroma b. Thylakoids c. Cytoplasm d. Mitochondria
17. Tulsi belongs to family _____.
a. Zingiberaceae b. Acanthaceae
c. Solanaceae d. Lamiaceae

18. Adulsa belongs to _____ family.
 a. Acanthaceae b. Lamiaceae c. Malvaceae d. Amaryllidaceae
19. _____ are the aromatic compounds synthesized by the plants.
 a. Acetyl CoA b. Phenolic c. Oxalic Acid d. Malic Acid
20. _____ is the Scientific name of Turmeric.
 a. *Curcuma longa* b. *Zingiber officinale*
 c. *Mangifera indica* d. *Hibiscus rosa-sinensis*
21. Paste of _____ is applied on prickly heat and dehydrated skin
 a. Sandalwood powder b. Zinger powder c. Haldi power d. Adulsa powder
22. _____ is a Source of Sandalwood oil.
 a. Heart wood b. Root c. Leaf d. flowers
23. Which of the following is NOT a primary metabolite
 a. Amino acid b. Glucose c. Tannins d. carbohydrates
24. _____ is used in aromatherapy.
 a. Sandalwood oil b. Turmeric c. Adulsa d. Aloe
25. The Photolysis of water is demonstrated by _____
 a. Aron b. Blackman c. Robert Hill d. Emerson

Q2. Answer the following questions (Any 1)**(10 Marks)**

- With help of a neat labeled diagram, describe the Transverse Section of Dicot stem.
- Describe different types of parenchymatous tissue and their function.

Q3. Answer the following questions (Any 1)**(10 Marks)**

- Describe the process of fixation of carbon dioxide in CAM plants.
- Describe the Calvin pathway of carbon fixation in C3 plants.

Q4. Answer the following questions (Any 1)**(10 Marks)**

- Give the Botanical name, family, source, active constituents & medicinal uses of Sandal wood.
- Distinguish Between Primary & Secondary Metabolites.

Q5. Short Notes (Any 4)**(20 Marks)**

- Arrangement of Vascular bundle in monocot stem
- Collenchyma
- Role of PEP Carboxylase
- Ultrastructure of Chloroplast
- Medicinal uses of Tulsi
- Medicinal uses of Aloe