120522

VCD/ BOTANY - I SEMESTER II MARKS-100 DURATION - 3 HRS

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. _____ is the most advanced type of stele.
   a. protostele b. siphonostele c. solenostele d. atactostele
2. Eustele is a type of _____
   a. protostele b. siphonostele c. solenostele d. atactostele
3. In *Nephrolepis*, each androcyte metamorphoses into spirally coiled, haploid, ---------- antherozoids.
   a. uniflagellate b. biflagellate c. triflagellate d. multiflagellate
4. The gametophyte of fern is called _____.
   a. prothallus b. micropyle c. sporangium d. hydathode
5. *Nephrolepis* shows homosporous condition, because _____.
   a. spores are of 2 different types b. some are small and few are large spore c. all spores are of same type d. some spores are undeveloped
6. _____ _ is single layered, external protective covering that looks like a mustache shaped in the transverse section of the sorus in *Nephrolepis*.
   a. annulus b. indusium c. operculum d. micropyle
7. In *Nephrolepis*, sori are present on _____ surface of the leaflet.
   a. abaxial b. adaxial c. central d. axial
8. _____ is a brown scale like epidermal outgrowths densely covering the rhizome, stolons, petiole and rachis.
   a. glandular hair b. ramentum c. latex d. tannin
9. *Cycas* belongs to order_____
   a. Cycadales b. Coniferales c. Gnetales d. Cycadophyta
10. *Cycas* is _____ Pollinated plant.
    a. Wind b. Insect c. Bird d. Water
11. In T.S of *Cycas* leaflet, the hypodermis is made up of _____
    a. Sclerenchyma b. Parenchyma c. Collenchyma d. Vessels
12. Which one of the following is a characteristic feature of Gymnosperm?
    a. Presence of Triploid Endosperm b.Double fertilization c. Exposed Ovule d. Presence of Monadelphous stamens
13. When the tracheids are in small amounts and parenchymatous cells are more are present in the stem. Such type of wood is called as_____
    a. Manoxylic wood b. pycnoxylic wood c. hard wood d. autumn wood
14. Male reproductive organ in *Cycas* is called as _____
    Megasporophyll Archegonia Microsporophyll Ovule
15. The microspore outer wall is known as _____
    a. Exine b. Intine c. Generative layer d. Prothallus layer
16. Type of ovule in *Cycas* is _____
    a. Orthotropous b. Anatropous c. Amphitropous d. Campylotropous

17. Leaves without stipules are called _____.
a. Stipulate b. Sessile c. Petiolate d. Ex-Petiolate

18. Tooth like margins of leaf is known as
a. Dentate b. serrate c. spinous d. entire

19. When more than two leaves arise from a single node it is called as _____ phyllotaxy
a. Whorled b. Alternate Opposite-decussate Opposite-superimposed

20. _____ placentation is found in Malvaceae
a. Axile b. Marginal c. Superficial d. Free central

21. Malvaceae belongs to the series _____.
a. Thalamiflorae b. Disciflorae c. Calyciflorae d. Epigynae

22. An example of perfoliate leaf base is _____
a. *Calotropis gigantea* b. *Lonicera* sp. c. *Tamarindus indicus* d. *Aloe perfoliata*

23. The arrangement of the flowers on an axis is called as _____
a. Phyllotaxy b. Inflorescence c. Infructescence d. Berry

24. Presence of axillary bud and nodal emergence are the key parameters known to define a/an _____
a. flower b. leaf c. fruit d. Angiosperm

25. When the tip of the leaf pointed is called as _____.
a. Acute b. Obtuse C. Tendrillar d. Mucronate

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

1. Explain the Internal structure/ T.S. of *Nephrolepis* Rachis with a neat and labeled diagram.
2. Explain the *Nephrolepis* gametophyte with a neat and labeled diagram.

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

1. Give an illustrated account of the internal structure of the young and old stem of *Cycas*.
2. Describe the internal structure of the leaf of *Cycas*.

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

1. Explain the various types of Compound leaves, Give suitable examples and diagrams for each type.
2. Give the Classification with reasons up to family level, floral formula and any 2 plants of economic importance of the family Amaryllidaceae. Draw the L.S. of flower and T.S. of Ovary.

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

1. Ramentum of *Nephrolepis*
2. *Nephrolepis*: antheridium
3. Pollen grain of *Cycas*
4. Explain the systematic position of *Cycas*.
5. Explain different types of simple cymose inflorescences giving suitable examples and diagrams.
6. Explain the various types of leaf shapes with examples and diagrams.