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**SUBJECT CODE NO: - Y-2053**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. F.Y (Sem-II)**  
**Examination March / April - 2023**  
**Botany Paper-V Histology, Anatomy and Embryology**

[Time: 1.30 Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N. B

- 1) Attempt all questions.
- 2) Draw neat & well labelled diagrams whenever necessary.

Q1 What are epidermal tissues? Describe in detail different types of stomata. 20

**OR**

Describe different theories of cellular organization of root and shoot apex.

Q2 Explain in detail the development of male gametophyte in angiosperms. 20

**OR**

Write short note on: - (any 4) 20

- a. Glandular and non-glandular trichomes
- b. Xylem vessel thickenings
- c. Anatomy of dorsiventral leaf.
- d. Functions of phellem, phellogen, phelloderm.
- e. Contrivances of self-pollinations.
- f. Anemophily

Q3 Multiple choice questions. 10

1. \_\_\_\_\_ plants have vessels in xylem.  
 a) Pteridophytes    b) Angiosperms    c) Algae    d) Bryophytes
2. Conjoint, collateral & open vascular bundles are found in \_\_\_\_\_.  
 a) monocots    b) Dicots  
 c) Both dicots and monocots    d) None of the plants
3. In Hydrophytes, floating ability is due to the presence of \_\_\_\_\_ tissue.  
 a) collenchyma    b) chlorenchyma  
 c) sclerenchyma    d) Aerenchyma
4. \_\_\_\_\_ increase the diameter of stem & root.  
 a) Intercalary meristem    b) Apical meristem  
 c) Lateral meristem    d) All of the these
5. Stomata are the example of \_\_\_\_\_.  
 a) Secretory tissues    b) Permanent tissues  
 c) meristematic tissues    d) Epidermal tissues

6. \_\_\_\_\_ tissues are found in all soft plant parts.
  - a) Parenchyma                      b) collenchyma
  - c) sclerenchyma                  d) None of the above
7. Tunica corpus theory is connected with \_\_\_\_\_
  - a) Root apex    b) Root cap    c) shoot apex    d) secondary growths
8. In embryogenesis, fusion of male gamete and polar nuclei results in \_\_\_\_\_
  - a) Endosperm    b) embryo    c) suspensor    d) Zygote
9. \_\_\_\_\_ layer of anther provides nourishment to the sporogenous tissue
  - a) Endothecium    b) middle    c) Tapetum    d) epidermal
10. After fertilisation, seed, coat develops from \_\_\_\_\_
  - a) Chalaza    b) Ovule    c) embryo sac    d) Integuments