

D 53530

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Name..... 51

Reg. No.....

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION, JANUARY 2014**

(UG—CCSS)

Complementary Course

Botany

**BO IC 01—ANGIOSPERM ANATOMY AND MICROTECHNIQUE**

Time : Three Hours

Maximum : 30 Weightage

I. Objective Type Questions : Answer all the *twelve* questions :

- 1 Which *one* of the following is not a component of epidermis ?
  - (a) Stomata.
  - (b) Trichomes.
  - (c) Cellulose and pectin.
  - (d) Lignin.
- 2 In which of the following passage cells are found ?
  - (a) Medula.
  - (b) Endodermis.
  - (c) Hypodermis.
  - (d) Pericycle.
- 3 Which of the following is primary lateral meristem ?
  - (a) Vascular cambium.
  - (b) Cork cambium.
  - (c) Inter fascicular cambium.
  - (d) Fascicular cambium.
- 4 With which of the following tissues latex producing cells are mostly associated ?
  - (a) Medula.
  - (b) Phloem.
  - (c) Xylem.
  - (d) Cortex.
- 5 Which of the following angiosperms do not possess vessels in their xylem ?
  - (a) *Hibiscus* and *Vinca*.
  - (b) *Lilium* and *Asparagus*.
  - (c) *Drimys* and *Trochodendron*.
  - (d) *Yucca* and *Dracaena*.
- 6 The term phloem was coined by \_\_\_\_\_.
- 7 \_\_\_\_\_ are balloon like outgrowths from xylem parenchyma protrude into the vessels through the pits due to injury /infection.

Turn over



- 8 \_\_\_\_\_ is a colourless, sweet tasting liquid and is used as reagent for dehydrating delicate filaments of algae and fungi.
- 9 The term \_\_\_\_\_ means the sudden stoppage of the life processes with respect to the entire organism and more specially individuals cells.
- 10 Where do you find extra xylary fibres ?
- 11 What is phellogen ?
- 12 What for aceto carmine is used ?

(12 × ¼ = 3 weightage)

II. Short answer questions. Answer all *nine* questions :

- 13 Explain the concept of Histogen theory.
- 14 Enumerate the components of complex tissues.
- 15 List out the types of vascular bundles.
- 16 Explain the principle and use of electron microscope.
- 17 List out the agents used in dehydration and clearing.
- 18 What is progressive staining and explain its significance.
- 19 Distinguish hydathodes from pneumatophores.
- 20 Explain the classification of meristematic tissues.
- 21 Explain the structural function of sclerenchyma.

(9 × 1 = 9 weightage)

III. Short essay or paragraph questions : Answer any *five* questions from seven :

- 22 Describe the structure and function of parenchyma.
- 23 What are tissues and explain the types of tissues.
- 24 Elucidate the structure and function of laticiferous tissue.
- 25 Describe the organization of root apex and its differentiation.
- 26 Explain the principle and uses of compound microscope.
- 27 Describe paraffin method and its significance.
- 28 Explain the significance of retrogressive staining and counter staining.

(5 × 2 = 10 weightage)



IV. Essay type questions : Answer any *two* questions from three :

- 29 Describe the secondary growth in Dicot root with labelled diagram.
- 30 Explain the structure of Dicotyledonous and monocotyledonous leaves in transverse section with labelled diagram.
- 31 Write an account of Microtomy.

(2 × 4 = 8 weightage)