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(6th Semester)

BOTANY

TENTH PAPER

(Angiosperm Taxonomy, Anatomy and Embryology)

Full Marks : 55

Time : 2½ Hours

(PART : A—OBJECTIVE)

(*Marks : 20*)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks : 5*)

Tick (✓) the correct answer in the brackets provided :

1×5=5

1. Distribution of Alkaloids has proved useful in the taxonomy of

- (a) Fabaceae ()
- (b) Ranunculaceae ()
- (c) Nymphaeaceae ()
- (d) None of the above ()

2. When the specific epithet exactly repeats the generic name it is known as

(a) priority ()

(b) tautonym ()

(c) taxa ()

(d) principle ()

3. When a style arises from the base of the ovary it is known as

(a) plumose ()

(b) linear ()

(c) gynobasic ()

(d) terminal ()

4. Early development of monocot and dicot embryos are similar up to

(a) diad stage ()

(b) quadrant stage ()

(c) octant stage ()

(d) globular stage ()

5. Interxylary phloem is formed due to

(a) formation of accessory strips of cambium ()

(b) abnormal behavior of normal cambium ()

(c) anomalous position of cambium ()

(d) anomalous behavior of abnormal cambium ()

SECTION—B

(Marks : 15)

Write notes on the following in brief :

3×5=15

1. Artificial system of plant classification
2. Importance of herbarium in the taxonomy of angiosperm
3. Anatomical feature of xerophytes
4. Inflorescence of Euphorbiaceae family
5. Solanand type of embryogeny

(PART : B—DESCRIPTIVE)

(Marks : 35)

The figures in the margin indicate full marks for the questions

1. Give a comparative account on classification of Bentham and Hooker, Engler and Prandtl and Hutchinson. 7

OR

Write accounts on the following :

3½×2=7

- (a) Numerical taxonomy
- (b) Chemotaxonomy

2. What is herbarium? Describe the methods involved in herbarium preparation and preservations. 2+5=7

OR

Write accounts on the following :

3½×2=7

- (a) Evolution of angiosperms
- (b) ICBN

3. Describe the distinguishing characters of the family Rutaceae. Mention its economic importance. 7

OR

Describe the floral characters of the following : $3\frac{1}{2} \times 2 = 7$

(a) Zingiberaceae

(b) Orchidaceae

4. What is root stem transition? Describe various types of transitions in angiosperm. $2+5=7$

OR

Write notes on the following : $3\frac{1}{2} \times 2 = 7$

(a) Anatomical features of hydrophytes

(b) Cambium

5. What is megagametogenesis? Describe different types of embryo sac. $2+5=7$

OR

Write accounts on the following : $3\frac{1}{2} \times 2 = 7$

(a) Endosperm

(b) Polyembryony

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