

2014

(6th Semester)

BOTANY

TENTH PAPER

**(Angiosperm taxonomy, Anatomy
and Embryology)**

Full Marks : 55

Time : 2 hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

*The figures in the margin indicate full marks
for the questions*

1. Write short notes on the following : $3\frac{1}{2} \times 2 = 7$
- (a) Chemotaxonomy
 - (b) Phylogenetic system of classification

Or

What is natural system of classification?
State the merits and demerits of Englov and
Prandtl system of classification. 7

2. Give brief notes on the following : $3\frac{1}{2}\times 2=7$
(a) Herbarium preparation
(b) Important Botanical gardens in India

Or

What is ICBN? Discuss in brief the rules and recommendation of ICBN. 7

3. Briefly describe the following : $3\frac{1}{2}\times 2=7$
(a) Economic importance of Orchidaceae
(b) Floral features of Asteraceae

Or

Describe the salient features of family Zingiberaceae with floral formula and floral diagram.

4. Write short notes on the following : $3\frac{1}{2}\times 2=7$
(a) Root-stem transition
(b) Anatomical features of hydrophyte

Or

What is secondary growth? Discuss the secondary growth in root.

5. Briefly describe the following : $3\frac{1}{2}\times 2=7$
(a) Monocot embryo
(b) Polyembryony

Or

What is embryo sac? Give an account of development of bisporic type of embryo sac. 7

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(PART : A—OBJECTIVE)

(Marks : 20)

The figures in the margin indicate full marks for the questions

Answer **all** questions

SECTION—A

(Marks : 5)

1. Put a Tick (✓) mark against the correct answer in the brackets provided : 1×5=5

(a) Endosperm is generally

- (i) haploid ()
- (ii) diploid ()
- (iii) triploid ()
- (iv) tetraploid ()

(b) Binomial nomenclature was proposed by

- (i) Linnaeus ()
- (ii) Bentham and Hooker ()
- (iii) Englov and Prandtl ()
- (iv) Hutchinson ()

(c) Pollination by wind is known as

- (i) anemophily ()
- (ii) hydrophily ()
- (iii) ombrophily ()
- (iv) mycophily ()

(3)

(d) Phloem is an example of

- (i) simple tissue ()
- (ii) complex tissue ()
- (iii) vascular tissue ()
- (iv) permanent tissue ()

(e) Pulses belong to the family

- (i) Rutaceae ()
- (ii) Asteraceae ()
- (iii) Scrophulariaceae ()
- (iv) Leguminosae ()

(4)

SECTION—B

(Marks : 15)

2. Write on the following in brief : 3×5=15

(a) Numerical taxonomy

(5)

(b) Bicollateral vascular bundle

(6)

(c) Three economically important plants of family Asteraceae

(7)

(d) Anomalous secondary growth

(e) Embryology in India

VI/MAT (ix)

2014

(6th Semester)

MATHEMATICS

Paper : Math-361

(Modern Algebra)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

Answer one question from each Unit

UNIT—1

1. State the fundamental theorem on homomorphism of groups. Hence, prove that if H is a normal subgroup of a group G , and K is a normal subgroup of G containing H , then

$$\frac{G}{K} \cong \left(\frac{G}{H} \right) / \left(\frac{K}{H} \right)$$

2+8=10

14G—200/561a

(Turn Over)