

2015

(6th Semester)

BOTANY

TENTH PAPER

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

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

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

1. Give the comparative account of Bentham and Hooker's and Hutchinson's systems of classification. 7

Or

What is the difference among artificial, natural and phylogenetic systems of classification?

2. What do you mean by 'botanical garden'?
Write a note on the importance of botanical garden. 2+5=7

Or

Describe in brief the evolution of angiosperms. 7

3. Describe the distinguishing characters of any one of the following families giving floral diagram and floral formula : 7

(a) Rutaceae

(b) Convolvulaceae

Or

Give accounts on the following : 3½+3½=7

(a) Economic importance of Leguminosae

(b) Floral characters of Liliaceae

4. Define cambium. Describe secondary growth in stelar and ex-stelar regions of dicot stem.

1+6=7

Or

Write short notes on the following : 3½+3½=7

(a) Anatomical features of xerophytes

(b) Anomalous secondary growth

5. Describe the development of embryo in typical dicotyledonous type (crucifer type). What is endosperm? Give an account on the development and function of endosperm.

1+6=7

Or

Briefly describe the following :

$3\frac{1}{2}+3\frac{1}{2}=7$

(a) Advantages and disadvantages of self-pollination

(b) Tetrasporic type of embryo sac

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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) Pappus is present in

(i) Asteraceae ()

(ii) Annonaceae ()

(iii) Verbenaceae ()

(iv) Cyperaceae ()

(b) The system of classification given by Bentham and Hooker is

- (i) natural ()
- (ii) phylogenetic ()
- (iii) artificial ()
- (iv) All of the above ()

(c) Pollinium is found in

- (i) Euphorbiaceae ()
- (ii) Polygonaceae ()
- (iii) Zingiberaceae ()
- (iv) Orchidaceae ()

(d) A ridged and furrowed stele is found in

(i) *Amaranthus* stem ()

(ii) *Mirabilis* stem ()

(iii) *Bignonia* stem ()

(iv) All of the above ()

(e) The type of embryo development in which 'the first division of the oospore is longitudinal' is found in

(i) crucifer type ()

(ii) piperad type ()

(iii) asterad type ()

(iv) solanad type ()

SECTION—B

(Marks : 15)

2. Write short notes on the following :

3×5=15

(a) Chemotaxonomy

(b) Holotype

(c) Three economically important plants of
Cyperaceae

(d) Cambium activity

(8)

(d) Polyembryony

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