

2015

(6th Semester)

BOTANY

NINTH PAPER

**(Pteridophyta, Gymnosperm, Paleobotany
and Palynology)**

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

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

1. Write the system of the classification of Pteridophyta. 7

Or

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

(a) Leptosporangiate type of sporangium development

(b) Heterospory in pteridophyte

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2. Write a note on the morphology and reproduction of *Marselia*. 7

Or

Discuss the characteristics and distribution of *Rhynia*.

3. Describe the structure of male and female strobili of *Ginkgo*. 7

Or

Discuss the structure and development of male and female gametophyte of *Ephedra*.

4. Write notes on any *two* of the following :

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

- (a) Evolution of gymnosperms ovule
- (b) General accounts of archegonia
- (c) Economic importance of gymnosperms

5. What is palynology? Describe pollen morphology with suitable diagram. 2+5=7

Or

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

- (a) Gondwana Flora
- (b) *Cordaites*

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(PART : A—OBJECTIVE)

(Marks : 20)

SECTION—A

(Marks : 5)

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

(a) The fertile telomes trusses were called the

(i) sporangial trusses ()

(ii) phylloid trusses ()

(iii) syntelomes ()

(iv) All of the above ()

(b) *Adiantum* belongs to class

- (i) Pteridopsida ()
- (ii) Lycopside ()
- (iii) Sphenopsida ()
- (iv) Psilopsida ()

(c) Heterosporous pteridophytes always produce

- (i) homothallic gametophyte ()
- (ii) heteromorphic gametophyte ()
- (iii) heterothallic gametophyte ()
- (iv) None of the above ()

(d) Which of the following gymnosperms is considered to be a living fossil?

(i) *Pinus roxburghe* ()

(ii) *Taxus baccata* ()

(iii) *Ginkgo biloba* ()

(iv) *Gnetum ula* ()

(e) *Cordaites* belongs to class

(i) Phaeophyta ()

(ii) Cycadophyta ()

(iii) Charophyta ()

(iv) Coniferophyta ()

(4)

SECTION—B

(Marks : 15)

2. Write notes on the following :

3×5=15

(a) Distribution of Lepidodendron

(b) Actinostele

(c) Morphology of Tarsus

(d) Structure of ovule in gymnosperm

(8)

(e) Pollen allergy

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