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(6th Semester)

BOTANY

NINTH PAPER

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

Full Marks : 55

Time : 2 hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

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

1. What is stele? Explain the stelar evolution in pteridophytes. 1+6=7

Or

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

(a) Concept of the Telome theory by Zimmermann

(b) Evolutionary trend in pteridophytes

(2)

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

Or

Discuss the characteristics and distribution of *Calamites*.

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

Or

Describe the structure of male and female strobili of *Taxus*.

4. Give an account on the distribution of living gymnosperms in India. 7

Or

Write the economic importance of gymnosperms.

5. Discuss the types of fossils. 7

Or

Write brief accounts on the following :

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

(a) Geological time scale

(b) Pollen allergy

2014

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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) Anemophily is a form of pollination whereby pollen is distributed by

(i) wind ()

(ii) insects ()

(iii) water ()

(iv) animals ()

(b) The oxine is made up of a resistant compound called

- (i) cellulose ()
- (ii) lignin ()
- (iii) pectin ()
- (iv) sporopollenin ()

(c) *Calamites* belongs to the class

- (i) Lycopsidea ()
- (ii) Sphenopsida ()
- (iii) Pteropsida ()
- (iv) Psilopsida ()

(d) Gymnosperms do not have

(i) fruits ()

(ii) seeds ()

(iii) leaves ()

(iv) None of the above ()

(e) Which one of the following is fossil seed fern?

(i) Cordaitales ()

(ii) Cycadofilicales ()

(iii) Gnetales ()

(iv) Bennettitales ()

(4)

SECTION—B

(Marks : 15)

2. Write notes on/Answer the following : 3×5=15

(a) Monoxlyic wood

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(b) Archegonia in gymnosperms

(6)

(c) Characteristics of *Phynia*

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(d) What is sorus? Give the types of sorus.

(B)

(e) Distinguish between eusporangiate and leptosporangiate.

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VI/BOT (34)