

Exam. Code : 103203

Subject Code : 8032

B.A./B.Sc. 3<sup>rd</sup> Semester (Old Sylb. 2016)

**BOTANY—III A**

**(Diversity of Seed Plants and their Systematics)**

Time Allowed—3 Hours]

[Maximum Marks—35

**SECTION—I**

**Note** :— Attempt all parts of Q. No. 1 of Section-I. Restrict your answer to 3-4 lines only. Each part carries 1 mark.

1. (i) Zygomorphic flower
- (ii) Sympodial branching
- (iii) Manoxylic wood
- (iv) Transfusion tissue
- (v) Arhaeopteris
- (vi) Monosporic female gametophyte development
- (vii) Phylogeny.

**SECTION—II**

**Note** :— Answer any **four** questions. Each question carries 7 marks.

2. "Diversity of angiosperms is more than that of the gymnosperms". Justify the statement with suitable examples.

3. Write a general account of the order Bennettitales (Cycadeoidales) of the fossil gymnosperms.
4. Give an overview of the diversity and distribution of living gymnosperms in India.
5. Explain the following :
  - (a) Petrifications
  - (b) Structure of the microsporophyll of *Cycas*.
6. Describe the primitive and advanced characters of angiosperms.
7. Draw well labelled diagrams of the following :
  - (a) V.S of leaflet of *Cycas*.
  - (b) L. S of ovule of *Ephedra*.
8. Is *Ginkgo* dioecious or monoecious ? Illustrate and describe the structure of male and female strobili of *Ginkgo biloba*.
9. Write briefly on the following :
  - (a) Major events in the evolution of seed habit.
  - (b) Co-evolution of insects and angiosperms.