

Roll No.

(12/24)

5204

B. Sc. EXAMINATION

(Third Semester)

BOTANY

Paper-I

Biology and Diversity of Seed Plants-I

Time : Three Hours

Maximum Marks : 40

Note : Attempt *Five* questions in all, selecting *two* questions from each Unit. Q. No. 1 (Short answer type question) is compulsory. All questions carry equal marks. Draw well labelled diagrams wherever required.

1. Define the following terms : $8 \times 1 = 8$

(a) Apogamy

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- (b) Paleobotany
- (c) Cleavage Polyembryony
- (d) Shower of sulphur dust
- (e) Petrification
- (f) Protoxylem
- (g) Microfossil
- (h) Siphonogamy.

Unit I

2. (i) Classify Gymnosperms up to orders as proposed by Pilger and Melchior. 4+4=8
- (ii) Write a note on evolution of seed habit in Gymnosperms. 4+4=8
3. Write notes on the following : 4+4=8
 - (i) Paleozoic era
 - (ii) Compression fossils and living fossils.

4. Explain Mesozoic and Cenozoic era. 8
5. Draw diagram of the following : 3+3+2=8
 - (i) L.S. Strobilus of Cycadeoidea
 - (ii) L.S. Seed of Lyginopteris
 - (iii) Male flower of Williamsonia.

Unit II

6. Describe the life-cycle of Cycas with the help of diagrams. 8
7. Draw diagram of the following with reference to Pinus : 3+3+2=8
 - (i) T.S. Needle
 - (ii) Structure of Ovule
 - (iii) Prepollination Germination of Pollen Grain.
8. Write notes on the following in Ephedra : 4+4=8
 - (i) Development of Embryo
 - (ii) Secondary growth in stem.

9. (i) Write important character of Angiosperms.

(ii) Mention primitive characters of Amentiferae and Ranales. $5+3=8$