

(i) Printed Pages: 3

Roll No.

(ii) Questions : 9 Sub. Code :

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Exam. Code :

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B.A./B.Sc. (General) 3rd Semester
(2124)

BOTANY

Paper-A : Diversity of Seed Plants & Their Systematics-I

Time Allowed : Three Hours] [Maximum Marks : 36

Note :— Attempt **FIVE** questions in all. Q. No. 1 is compulsory and is of **8** marks, comprising **FOUR** MCQ & **FOUR** Fill in the blanks. Attempt **FOUR** more questions, selecting **ONE** each from Units I to IV carrying 7 marks each.

1. (A) Tick the correct answer :

(i) In general, all Gymnospermic ovules are :

- (a) Orthotrous & Bitegmic
- (b) Anatropous & Unitegmic
- (c) Orthotropous & Unitegmic
- (d) Anatropous & Bitegmic

(ii) Cycas is :

- (a) Perennial & Evergreen Tree
- (b) Annual & Small Bush
- (c) Perennial & Palm Like evergreen
- (d) Annual & Aquatic

(iii) In Pinus, Dwarf shoot bearing Needles is called :

- (a) Long Shoot (b) Spur
(c) Sporophyll (d) Foliage

(iv) Pollination is Anemophyllous in :

- (a) Pinus
(b) Cycas
(c) Ephedra
(d) In all the Gymnosperms 4×1=4

(B) Fill in the blanks :

- (i) Meaning of word Gymnosperm is _____.
(ii) Scientific name of Chilgoza pine is _____.
(iii) Stem and Seeds of Cycas yields a Starch called _____.
(iv) Most useful drug obtained from Ephedra is _____.
4×1=4

UNIT—I

2. (a) Write a note on Reproductive structures in Gymnosperms. 4
(b) Write any 6 differences between Gymnosperms & Angiosperms. 3
3. (a) Write 3 uses of each in case of Cycas & Pinus. 3
(b) Differentiate between Manoxylic & Pycnoxylic wood. 2
(c) Write a note on Archigonium in Gymnosperms. 2

UNIT—II

4. (a) Describe the morphology of Williamsoniella. 4
(b) Write a note on Stem of Lyginopteris. 3
5. (a) What are Fossils ? How these are formed and how their age is found ? 4
(b) Describe any 2 types of fossils. 3

UNIT—III

6. Write notes on :
(a) Megasporophyll of Cycas. 3
(b) Write a note on Antherozoid of Sago Palm. 2
(c) Write a note on Bulbil of Cycas. 2
7. (a) Describe Embryo formation events in Cycas. 4
(b) Write briefly about the pollination & fertilization in Cycas. 3

UNIT—IV

8. (a) What is Cleavage Polyembryony ? Explain the process of embryo formation in Pinus. 5
(b) Write a note on Spur & its types. 2
9. (a) Write a short note on the Morphology of Ephedra. 4
(b) Describe the structure of Seed in Ephedra. 3