

(i) Printed Pages :4]

Roll No. ....

(ii) Questions :9]

Sub. Code :

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Exam. Code:

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**BA./B.Sc. (General) 3rd Semester  
Examination  
1127  
BOTANY  
(Diversity of Seed Plants and their  
Systematic-I)  
Paper : A**

**Time : 3 Hours]**

**[Max. Marks : 36**

- Note :- (i) Attempt five questions in all, selecting one question from each Unit.  
(ii) Question No. 1 is compulsory.  
(iii) Draw diagram where necessary.

1. (A) Multiple choice questions. Pick up correct choice.

- (i) Stem and seeds of which plant yield a starch called 'Sago'?  
(a) Cycas

- (b) Pinus
- (c) Ephedra
- (d) Gnetum

(ii) Crossotheca is which organ that is imperfectly known part of Lyginopteris?

- (a) leaf
- (b) stem
- (c) seed bearing
- (d) pollen bearing

(iii) Cycas ovule is :

- (a) anatropous
- (b) orthotropous
- (c) hemitropous
- (d) circinotropous

(iv) Winged pollen grains are present in

- (a) Gnetum
- (b) Pinus
- (c) Cycas
- (d) Ephedra

(v) Which Species of Ephedra is most common in dry areas of Punjab

- (a) Triandra
- (b) Foliata
- (c) Major
- (d) Saxatilis

(vi) Religious gymnosperm grown in temples of China and Japan and worshipped is

- (a) Gnetum
- (b) Cycas
- (c) Ginkgo
- (d) Pinus

6x1=6

(B) Fill in the blanks :

(i) World's tallest gymnosperms is .....

(ii) ..... has mycorrhizal roots.

(iii) Pollen bearing organs of Lyginopteris was given the name .....

(iv) The egg of cycas is .....

(v) Common name of pinus gerardiana is .....

(vi) Long micropylar tube is present in the ovule of .....

6x1=6

## **Unit-I**

2. Differentiate between manoxylic and pycnoxylic wood. 6
3. Give general characters of gymnosperms. 6

## **Unit-II**

4. Write note on fossil gymnosperm-Williamsonia. 6
5. Describe methods for the formation of fossils. 6

## **Unit-III**

6. Draw T. S. Young stem of cycas and label it. 6
7. Describe the development of female gametophyte in cycas. 6

## **Unit-IV**

8. Draw a well labelled diagram of T. S. Pinus needle. 6
9. Describe male strobilus of Ephedra. 6