

(i) Printed Pages : 2

Roll No. ....

(ii) Questions : 9

Sub. Code : 

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Exam. Code : 

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B.A./B.Sc. (General) 3<sup>rd</sup> Semester

1128

BOTANY

Paper : (A : Diversity of Seed Plants & their Systematic-I)

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :- (1) Attempt FIVE questions in all, selecting one from each Unit.

(2) Question No. 1 is compulsory.

(3) Draw diagrams where necessary.

1. (A) Multiple Choice Questions. Pick up correct choice :—

(i) Chilgoza is obtained from seeds of :

- (a) *Pinus roxburghii*      (b) *Pinus gerardiana*  
(c) *Pinus merkusii*      (d) *Pinus wallichiana*

(ii) "Sago Palm" is the common name of :

- (a) *Cycas*      (b) *Pinus*  
(c) *Ephedra*      (d) *Cedrus*

(iii) Pycnoxylic wood is found in :

- (a) *Ginkgo*      (b) *Pinus*  
(c) *Cycas*      (d) None of these

(iv) In which of the following female cone is absent ?

- (a) *Pinus*      (b) *Cycas*  
(c) *Ephedra*      (d) *Ginkgo*

(v) Foliage leaves in *Pinus* are present on :

- (a) Stem      (b) Long shoot  
(c) Dwarf shoot      (d) All of these

- (vi) Mycorrhizal symbiotic association exists between ,  
 (a) Fungus + roots of Cycas  
 (b) Fungus + roots of Pinus  
 (c) Bacteria + roots of Cycas  
 (d) Algae + roots of Pinus 6×1=6

(B) Fill in the blanks :—

- (i) Fertilization with the help of cilia is called \_\_\_\_\_.  
 (ii) In Pinus ovule is \_\_\_\_\_ type.  
 (iii) When more than one embryo is formed from fertilized egg, it is called \_\_\_\_\_.  
 (iv) The upper sterile portion of Microsporophyll in Cycas is called \_\_\_\_\_.  
 (v) Longest Neck of Archegonium is found in \_\_\_\_\_ Gymnosperm.  
 (vi) Sulphur dust can be seen in \_\_\_\_\_ during pollination.

6×1=6

#### UNIT—I

2. Give an account of general characters of Gymnosperms. 6  
 3. Differentiate between Gymnosperms and Angiosperms. 6

#### UNIT—II

4. What are Fossils ? Discuss their types and formation. 6  
 5. Describe the external morphology and reproductive organs in Williamsonia. 6

#### UNIT—III

6. Describe in detail the male cone of Cycas. 6  
 7. Describe the development of Female gametophyte of Cycas. 6

#### UNIT—IV

8. Write notes on :—  
 (a) Male Cone of Ephedra.  
 (b) Dimorphic leaves of Pinus. 3+3  
 9. Describe in detail the development of Embryo in Pinus. 6