

(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

1125

BOTANY

Paper : A : Diversity of Seed Plants and their Systematics-I

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :- (i) Attempt **five** questions in all, selecting **one** question from each Unit.

(ii) Question No. I is compulsory.

(iii) Draw diagrams where necessary.

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

(i) Winged Pollen grains are present in :

(a) Cycas

(b) Pinus

(c) Ephedra

(d) Gnetum

(ii) How many concentric rings of vascular cambium are formed in Cycas Pectinata ?

(a) 10

(b) 12

(c) 14

(d) 16

(iii) In Ephedra, both male and female strobili are :

- (a) Simple
- (b) Compound
- (c) Open
- (d) Absent

(iv) Who is known as "Father of Indian Paleobotany" ?

- (a) Williamson
- (b) Potonie
- (c) Binney
- (d) Birbal Sahni

(v) Vessels are present in which gymnosperm ?

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

(vi) Strongest coniferous wood used for railway sleepers is obtained from :

- (a) Pinus
- (b) Cedrus
- (c) Ginkgo
- (d) Taxus.

6×1=6

(B) Fill in the blanks :

(i) Cycas yields a starch called _____ .

(ii) Pollen bearing organ of Lyginopteris was given the name _____ .

(iii) Inverted omega like vascular bundles are present in _____ .

- (iv) Leaves of *Pinus* are _____ .
(v) 'Jointed Fir' is the common name of _____ .
(vi) Neck canal cells are _____ in gymnosperms.

6×1=6

UNIT-I

- II. Differentiate between gymnosperms and angiosperms. 6
III. Differentiate between manoxylic and pycnoxylic wood. 6

UNIT-II

- IV. What are fossils ? Explain various types. 6
V. Describe external morphology and reproductive organs of *Williamsonia*. 6

UNIT-III

- VI. Describe male cone of *Cycas*. 6
VII. Describe structure (internal) of *Cycas* leaflet with diagram (Cellular). 6

UNIT-IV

- VIII. Describe external morphology of *Pinus*. 6
IX. Describe female cone of *Ephedra*. 6