

2021

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

Paper-A: Diversity of Seed Plants &amp; Their Systematic-I

Time allowed: 3 Hours

Max. Marks: 36

**NOTE:** Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit. Draw diagrams where necessary.

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- I. (a) MCQ. Pick the correct choice: -
- (i) World's tallest Gymnosper is:-
 

(a) Pinus	(b) Sequoia
(c) Ginkgo	(d) Gnetum
  - (ii) Manoxylic wood is found in:-
 

(a) Cycas	(b) Pinus
(c) Ephedra	(d) Taxus
  - (iii) Which ERA is age of Gymnosperms?
 

(a) Cambrian	(b) Palaeozoic
(c) Mesozoic	(d) Cenozoic
  - (iv) In coralloid root, blue green region is found in: -
 

(a) Epidermis	(b) Cortex
(c) Vascular bundles	(d) Pith
  - (v) Seeds are winged in: -
 

(a) Cycas	(b) Pinus
(c) Ephedra	(d) Lyginopteris
  - (vi) Profuse branching, jointed stem and reduced leaves are found in: -
 

(a) Gnetum	(b) Pinus
(c) Ephedra	(d) Ginkgo

(6×1)
- (b) Fill in the blanks: -
- (i) Funeral wraths are made from the leaves of \_\_\_\_\_.
  - (ii) Fossil plant discovered from Bihar/India is \_\_\_\_\_.
  - (iii) Cycas sperm is largest in Plant Kingdom. Its size is \_\_\_\_\_.
  - (iv) In monofoliar spur, the shape of needle is \_\_\_\_\_.
  - (v) The process where many embryos are formed from single zygote is called \_\_\_\_\_.
  - (vi) Seeds of which species of Pinus are edible \_\_\_\_\_.
- (6×1)

**P.T.O.**

(2)

UNIT – I

- II. Write vegetative & reproductive characters of Gymnosperms. Write atleast names of six Gymnosperms. (6)
- III. Write notes on: -
- (a) Manoxylic and Pycnoxylic wood
  - (b) Archagonium in Gymnosperms (3+3)

UNIT – II

- IV. What are fossils and fossilization? Explain the various types of fossils. (6)
- V. Describe external morphology. Male & female flowers in fossil plant – Williamsonia. (6)

UNIT – III

- VI. Describe the structure of male cone and megasporophylls in Cycas. (6)
- VII. Write notes on: -
- (a) Seed of Cycas
  - (b) Leaf of Cycas (3+3)

UNIT – IV

- VIII. Describe the development of male gametophyte in Pinus along with structure of Pollen Grain. (6)
- IX. Write notes on: -
- (a) Economic importance of Ephedra
  - (b) Male flower of Ephedra
  - (c) Angiospermic characters in Ephedra (2+2+2)

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