

**BACHELOR OF SCIENCE (CBCS - 2016 COURSE)**  
**T. Y. B Sc. Sem-VI : WINTER :- 2021**  
**SUBJECT: BOTANY : BIOLOGY OF SEED PLANTS (GYMNOSPERMS & PALEOBOTANY)**

Day : Wednesday  
Date 19-01-2022

W-15062-2021

Time : 02:00 PM-05:00 PM  
Max. Marks: 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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- Q.1** Attempt any **TWO** of the following: **(12)**
- a) Describe coralloid roots of *Cycas*.
  - b) Give structure of pollen grain in *Pinus*.
  - c) Explain importance of Gymnosperms as timber.
- Q.2** Attempt any **TWO** of the following: **(12)**
- a) Give external morphology of *Thuja*.
  - b) Describe male cone of *Zamia*.
  - c) Give distribution of Gymnosperm in India.
- Q.3** Attempt any **TWO** of the following: **(12)**
- a) Explain structure of ovule in *Cycas*.
  - b) Describe structure of seed in *Gnetum*.
  - c) Describe female cone of the *Pinus*.
- Q.4** Attempt any **THREE** of the following: **(12)**
- a) Explain importance of mycorrhiza in *Pinus*.
  - b) Give external morphology of *Gnetum*.
  - c) Explain the contribution of Birbal Sahani in classification of *Gymnosperm*.
  - d) Describe vegetative reproduction in *Cycas*.
- Q.5** Attempt any **FOUR** of the following: **(12)**
- a) Give affinities of *Gnetum* with Angiosperms.
  - b) Explain morphological characters of *Cycadeoidea*.
  - c) Give anatomical features of *Cycas* leaflet.
  - d) Describe outline of Gymnosperm classification according to *Chamberlain*.
  - e) Give process of fossilization.
  - f) Give *Lepidocarpon* in brief.

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