

U.G. 3rd Semester Examination - 2021

BOTANY

[HONOURS]

Course Code : BOT-H-CC-T-06

(Diversity of Gymnosperms and Paleobotany)

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer all the questions.

1. Answer any **five** of the following: 2×5=10
- Mention two medicinally important gymnosperms mentioning their uses.
 - What is girdling leaf trace? Name a plant where it occurs.
 - What is coal ball?
 - What is Poly embryony? Give example.
 - Why is the genus *Ginkgo* regarded as living fossil?
 - Mention two Xeromorphic features of *Ephedra* sp.
 - What is pseudo fossil?
 - Define “*Phyletic Gradualism*”.

2. Answer any **two** of the following: 5×2=10
- Outline the classification of Gymnosperm as proposed by Gifford and Foster (1989). 5
 - Describe the process of fossilization of a petrified wood. Cite an example of petrified fossil. 4+1
 - What is the basis of Progymnosperm concept? Mention the geological age of occurrence of Progymnospermophyta. 4+1
 - Describe the uses of various types of resins and their sources in Gymnosperms. 5
3. Answer any **two** of the following: 10×2=20
- Name the different organ genera of the reconstructed plant *Williamsonia*. Describe its male and female fructifications with diagram. 2+4+4
 - Describe with suitable diagrams the female gametophyte of *Cycas* and *Gnetum*. 5+5
 - Schematically represent the standard Geologic Time Scale. Mention the major events of plant life through the earth history. 5+5
 - Characterize the *Glossopteris* plant and mention its importance in establishing existence of Gondwana land. 6+4