

U.G. 3rd Semester Examination - 2020

BOTANY

[HONOURS]

Course Code : BOTH-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** questions : 2×5=10
- a) Give the significant contribution by C. B. Beck (1960).
 - b) Distinguish manoxylic and pycnoxylic wood with examples.
 - c) Define index fossil with example.
 - d) Mention four fern characters of *Cycas* sp.
 - e) Give four angiospermic characters of *Gnetum* sp.
 - f) Mention the importance of copal and amber.

- g) What is meant by the “Half Life” of a radio element?
 - h) What do you mean by “mass extinction”?
2. Answer any **two** of the following: 5×2=10
- a) Write the importance of gymnosperms in food and medicine. 5
 - b) Discuss the conditions favourable for fossilization. 5
 - c) Describe in brief the radiocarbon method of dating. 5
 - d) Classify the Mesozoic era into periods and mention the floral succession through the time. 1+4=5
3. Answer any **two** of the following: 10×2=20
- a) With suitable diagram describe the internal structure of *Cycas* leaflet. Mention the xerophytic characters of leaflet. Give a common character of *Cycas* and *Ginkgo*. 7+2+1=10
 - b) Give illustrated account of the embryogeny of *Pinus*. Differentiate endosperm of gymnosperm and angiosperm. 8+2=10
 - c) Name the different organ genera of the reconstructed plant *Lyginopteris*. Describe its

male and female fructifications. Mention its age and area from it was discovered.

$$2+3+3+1+1=10$$

- d) What is meant by the “ Gondwana sequence” in India? What are the basis of three fold classification? Give a brief account of the megafloal succession through the “Permian Gondwana”.

$$2+2+6=10$$
