

U.G. 4th Semester Examination - 2026**BOTANY****[MAJOR-V]****Course Code : BOT-MJ-CC-T-05****(Gymnosperm and Palaeobotany)****[NEP-2020]**

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.*

1. Answer any **five** questions: 2×5=10
- a) What is coal ball?
 - b) Write two Indian species of *Cycas*.
 - c) Write two diagnostic features of Gnetophyta.
 - d) What is Taphonomy?
 - e) What is duripartic preservation?
 - f) Mention suffixes used for naming secondary xylem and seed of fossilised plants with examples.
 - g) Define index fossil with examples.
 - h) Name a medicinally important gymnosperms and the active principle obtained from it.

[Turn over]

2. Answer any **two** questions: 5×2=10
- a) What is progymnosperms? Briefly explain its evolutionary significance.
 - b) Write a short note on the importance of fossil study.
 - c) Describe leaf anatomy of *Pinus*.
 - d) Write a short note the wood anatomy, pollen and ovule bearing organs of the reconstructed plant *Lyginopteris* with labelled diagrams.
3. Answer any **two** questions: 10×2=20
- a) Distinguish between the wood anatomical features of *Cycas* and *Pinus*. Write a short note on economic importance of gymnosperms. 4+6
 - b) Describe with diagram male and female reproductive organs of *Gnetum*. Mention the angiospermic features of *Gnetum*. 6+4
 - c) Write a note on Phyletic gradualism and Punctuated equilibrium. Briefly describe the conditions of fossilization process. 6+4
 - d) Describe the structured organization, geological occurrence and evolutionary significance of *Lyginopteris*. 10
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