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**PG CBCS**

**M.Sc. Semester-I Examination, 2021**

**BOTANY**

PAPER: BOT 104

**(PTERIDOPHYTES & GYMNOSPERMS)**

**Full Marks: 40** **Time: 2 Hours**

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**Write the answer for each unit in separate sheet**

**BOT 104.1**

PTERIDOPHYTES

**Answer any TWO questions from the following: 2X10 =20**

1. Characterize Zosterophyllopsida. Mention four genera of the group. How does the group differ from Rhyniopsida? Why the group is regarded as the progenitor of Lycopsida? 3+2+2+3
2. What are annulus and stomium? How leptosporangiate sori differs from eusporangiate ones. Write a short note on soral evolution of pteridophytes. 2+3+5
3. Characterize Lycopsida. Describe with suitable illustrations about morpho-anatomical features and reproductive structures of an arborescent Lycopsid. 3+3+4
4. Characterize Trimerophytopsida. Mention two genera of the group. Why Trimerophytopsida is regarded as the cardinal group in evolution of higher clads of pteridophytes? 4+2+4
5. Write short notes on: 5 X 2
   (a) Apogamy in pteridophytes.
   (b) Progymnosperms

**BOT 104.2**

GYMNOSPERMS

**Answer any TWO questions from the following: 2X10 =20**

1. Illustrate different fossil genera of *Pentoxylon* plant. 10
2. Characterize Cycadales. Name the extant genera of the group. Write down the evolutionary trends of leaves among the different members of Cycadales. 3+4+3
3. Describe the root and leaf forms of *Glossopteris*. Name the seeding genus of *Glossopteris*. Write a brief note on *Cayatonia* fruit. 6+1+3
4. Characterize Pteridospermales. Mention the families of the group. Describe the stem and leaf genera of *Lygnopteris* plant. 4+2+4
5. Write notes on 5×2
   a. Origin of seed-cone complex among extinct and extant conifers;
   b. Gymnosperm as source of wood and resin.

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