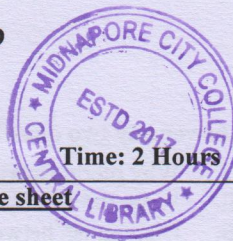


PG (NEW) CBCS
M.Sc.Semester-I Examination, 2019
BOTANY
PAPER: BOT-104
(PTERIDOPHYTES & GYMNOSPERMS)

Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

UNIT I:

PTERIDOPHYTES

1. Answer any two questions of the following: 2×2=4
 - i. With example mention the characteristic features of early vascular land plants.
 - ii. What is enation? Write down the evolutionary significance of it?
 - iii. Define mixed sori with example.
 - iv. Distinguish between apospory and apogamy.

2. Answer any two questions of the following: 4×2=8
 - i. Write a short note on gametophytes of Rhyniopsida.
 - ii. Characterize Trimerophytopsida. Mention the diversity of branching pattern found in this group. 2+2
 - iii. Schematically represent the classification of filicalian ferns as per Pichi-Sermolli (1977).
 - iv. Write down the basis of formation of the group- Progymnospermopsida. Mention its evolutionary significance. 2+2

3. Answer any one question of the following: 8×1=8
 - i. Characterize Lycopsidea. Describe with suitable illustrations about the morpho-anatomical features and reproductive structure of and arborescent lycopsid. 2+3+3
 - ii. Characterize Filicales. Discuss with illustrations about the evolution of social structures in the filicalian ferns. 3+5

(Turn Over)

(2)

UNIT II:

GYMNOSPERMS4. Answer any two questions of the following:

2×2=4

- i. Why pteridosperms are known as seed fern?
- ii. Write the names of the male and female fructifications of cycadaceae.
- iii. Distinguish between monoxyle and pycnoxylic wood?
- iv. Mention two economic importances of gymnosperms.

5. Answer any two questions from the following:

4×2=8

- i. Classify gymnosperms according to Stewart and Rothwell (1993).
- ii. Write a short note on World distribution of conifers.
- iii. Draw and describe *Glossopteris* leaf.
- iv. Characterize Gnetales. Mention its importance.

6. Answer any one question of the following:

8×1=8

- i. Write down the characteristic features of Medullosaceae. Give a comprehensive account on the male fructifications of this group and state the line of evolution. 3+5
- ii. Characterize Cycadales. With suitable illustrations trace the evolution of megasporophyll among the members of this group. 2+6