

Term End External Examination 1ST Semester (Session-Feb 2025)

Subject: Botany

Course No and Title: BOT122M/ Biodiversity of Microbes, Algae, Fungi and Archegoniate

Time: 2.15 hours Max Marks:100 Min. Marks:40

Section A: Objective Type Questions

Q1. Choose the appropriate Answer: (8x1.5=12)

- i. Genetic material of TMV is

A Single stranded DNA	B Single stranded RNA
C Double stranded DNA	D Double stranded RNA
- ii. Lichen is a symbiotic association between Fungi and

A Roots	B Virus
C Algae	D Animals
- iii. Agar- Agar is derived from

A Rhodophyceae	B Chlorophyceae
C Xanthophyceae	D Phaeophyceae
- iv. Which of the following is a colonial alga

A <i>Chlamydomonas</i>	B <i>Oedogonium</i>
C <i>Ulothrix</i>	D <i>Volvox</i>
- v. Amphibians of Plant kingdom are

A Algae	B Bryophytes
C Pteridophytes	D Gymnosperms
- vi. Which of the following group is not included in Archegoniates

A Algae	B Pteridophytes
C Bryophytes	D Gymnosperms
- vii. Which of the following is a fossil Pteridophyte

A <i>Pteris</i>	B <i>Dryopteris</i>
C <i>Equisetum</i>	D <i>Rhynia</i>
- viii. All Gymnosperms are pollinated by

A Wind	B Water
C Insects	D Animals

Section-B: Descriptive Type Questions (Short Type)

Q2: Answer all the Questions (8 x 4 =32)

- i. Give a general account of structure of TMV.
- ii. Give a general account and significance of Mycorrhiza.
- iii. Give an outline of life cycle of *Nostoc*.
- iv. Draw a labelled diagram of *Batrachospermum*.
- v. Write any three diagnostic characters of Bryophytes unique to them.
- vi. How is Apospory different from Apogamy.
- vii. Define Heterospory and give its significance.
- viii. Give a brief account of economic importance of Gymnosperms.

Section – C: Descriptive Type Questions (Medium Type)

Answer all the questions: (4 x 7=28)

Q3. Explain briefly Conjugation and Transduction in Bacteria.

OR

Explain briefly the life cycle of *Rhizopus*.

Q4. Explain the Life cycle of *Ectocarpus*.

OR

Give an account of economic importance of Algae.

Q5. Give an account of alternation of generation in Bryophytes.

OR

Explain briefly the Morphology and Sexual reproduction in *Marchantia*.

Q6. Give a general account of *Rhynia*.

OR

Explain briefly the process of sexual reproduction in *Pinus*.

Section – D: Descriptive Type Questions (Long Type)

Answer any two of the following: (2 x 14=28)

- Q7.** Give a detailed account of General characteristics of Fungi and Economic importance of Bacteria.
- Q8.** Explain in detail the range of thallus structure in Algae. What are the various criteria for algal classification?
- Q9.** Explain the Evolution of Sporophyte in Bryophytes. What are the main adaptations of Bryophytes to land habit.
- Q10.** Explain in detail the Evolution of stellar system in Pteridophytes.