

Dr. B R Ambedkar Open University
Faculty of science, M.Sc. Botany Semester - 1 (2025-2026)

COURSE -01(M.Sc-BOT-12201): BIOLOGY, DIVERSITY OF MICROBES AND FUNGI

Instructions

- Include on first page: Name, Admission number, Programme (MSc Botany), Course title, Assignment number (1 or 2), Study center name, Mobile number, Signature.
- Each course has two separate assignments (Assignment I and Assignment II), each carrying 15 marks with a minimum passing mark of 06; do not submit a single combined assignment.
- Answer all the questions and draw diagram where ever necessary.
- Each question carries 5 marks
- Do not copy-paste from others; write in your own words to avoid disqualification.
- For references use academic books, Google, research articles
- Formatting Standards: Handwrite on A4 sheets, legible; page numbers
- Submission Process: Staple and submit it to the PG coordinator, Dr Braou, STML building. Obtain an acknowledged receipt and keep a copy for you record.

ASSIGNMENT - 1

Max.Marks -15

Min.Marks – 06

1. How does neutral evolution contribute to genetic diversity?
2. Compare and contrast the four major groups of archaebacteria.
3. Analyze the significance of prebiotic chemistry in the context of early Earth's conditions.

ASSIGNMENT - II

Max.Marks -15

Min.Marks – 06

1. Compare and contrast transformation, transduction and conjugation in Bacteria?
2. Evaluate the role of host plant resistance and biocontrol agents in sustainable disease management.
3. Analyse the prevalence, symptoms, and management rice blast in rice crops

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COURSE -02(M.Sc-BOT-12202):NON-VASCULAR PLANTS

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ASSIGNMENT - 1

Max.Marks -15

Min.Marks – 06

1. Describe in detail the Thallus organization in Algae.
2. Compare and contrast Laminaria with other major types of macro Algae What distinguishing features do these groups have in terms of biology, ecology, and commercial applications?
3. Sketch and label the life cycles of Algae

ASSIGNMENT – II

Max.Marks -15

Min.Marks – 06

1. Analyze the Differences in Algae and Bryophyte
2. Write briefly about the General Character and classification of jungermanniales.
3. Explain about the evolution of the sporophyte in Bryophytes.

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COURSE -3(M.Sc-BOT-12203): PTERIDOPHYTA, GYMNOSPERMS AND PALEOBOTANY

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ASSIGNMENT - 1

Max.Marks -15

Min.Marks – 06

1. “Pteridophytes are said to form a bridge between bryophytes and gymnosperms” – Explain the reasons?
2. Explain the importance of heterospory in Pteridophytes.
3. Evaluate the economic importance of gymnosperms, focusing on their contributions to timber, medicine and food sources in India

ASSIGNMENT - II

Max.Marks -15

Min.Marks – 06

1. Analyze the Differences in Pteridophytes and Gymnosperms
2. Describe the Scope of Paleobotany.
3. Write an essay on Deccan Intertrappean flora.

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COURSE -04(M.Sc-BOT-12203):.PLANT BIOCHEMISTRY

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ASSIGNMENT - 1

Max.Marks -15

Min.Marks – 06

1. Elaborate on the role of colligative properties in biological systems. How do they aid organisms in adapting to extreme environments?
2. Explain the chemiosmotic theory proposed by Peter Mitchell. How does the proton gradient drive ATP synthesis in mitochondria or chloroplasts?
3. Describe the general mechanism of enzyme action with molecular-level.

ASSIGNMENT - II

Max.Marks -15

Min.Marks – 06

1. Classify plant glycosides by structure and evaluate their pharmacological applications
2. Describe the process of fat synthesis and breakdown in plant seeds.
3. Differentiate primary from secondary metabolites using a table with three examples each, including biosynthetic origins and functions