

Dr. B R Ambedkar Open University
Faculty of science, M.Sc.2nd year Botany, (2025-2026)

Course -5.CELL BIOLOGY, GENETICS, BIOSTATISTICS AND ECOLOGY

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. What are carrier proteins? Explain their types role in transport function.
2. Explain why and where the programmed cell death is needed in the organisms.
3. Describe the theories of crossing over and chiasma formation.

ASSIGNMENT - II

Max.Marks -15

Min.Marks – 06

1. What is analysis of variance. Explains its assumptions and method of analysis.
2. Write a detailed account on the levels of organization of Biological spectrum.
3. What is Global warming, and state the evidences for global warming.

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COURSE -06. MEDICINAL PLANTS & EMBRYLOGY OF ANGIOSPERMS

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ASSIGNMENT - I

Max.Marks -15

Min.Marks – 06

1. Write notes on the role of phytochemical in modern medicine.
2. Evaluate conservation challenges for medicinal plants used in health care systems.
3. Design brief ethanobotanical survey (hypothetical or based literature) on medicinal plants used by tribal communities in Telangana for treating diabetes.

ASSIGNMENT – II

Max.Marks -15

Min.Marks – 06

1. Describe the endosperm haustoria seen in different types of endosperm you have studied and add a note on the functions of the endosperm.
2. What is Parthenocarpy? Explain how it can be induced. Add a note on its importance in the horticulture.
3. Analyze key palynological features used for plant identification.

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COURSE -07: APPLIED MYCOLOGY AND PLANT PATHOLOGY

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ASSIGNMENT - I

Max.Marks -15

Min.Marks – 06

1. Describe the different modes of asexual reproduction in fungi.
2. Describe the growth requirements of paddy straw mushroom.
3. Examine the applications of fungal biotechnology in biodegradation for sustainable agriculture

ASSIGNMENT – II

Max.Marks -15

Min.Marks – 06

1. Describe the history of plant pathology?
2. Write an account on Defense structures formed in response to infection by the pathogen.
3. Describe different fungal diseases of cash crops?

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Course -8.PLANT MOLECULAR BIOLOGY AND BIOTECHNOLGOHY

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ASSIGNMENT - I

Max.Marks -15

Min.Marks – 06

1. Illustrate the organization of plant genome.
2. Discuss about eukaryotic polymerases.
3. Write about the nomenclature of restriction endonucleases and give some examples.

ASSIGNMENT - II

Max.Marks -15

Min.Marks – 06

1. What are cloning vectors and their significance in r-DNA technology
2. Write in brief about somatic embryogenesis and its importance.
3. Describe briefly biosafety norms.