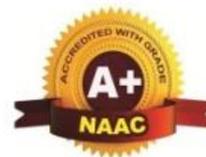




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Department of Biotechnology

BSc SEMESTER – I

Study Material

The faculty of department Biotechnology have prepared the class notes to ease the student's learning process. This is an effective and collective attempt to summarize university prescribed syllabus. This will facilitate students for better understanding of concept and provide deep insight into prescribed syllabus. The present study material is supplemented with variety of fully solved examples and illustrative figures. We hope this study material fulfill the needs of the students of BSc I semester for the academic year 2025-26 under SEP 2024 onwards CBCS scheme. This study material covers the topics Introduction, Cell and cellular organelles, Chromosomes and cell division, Inheritance and Gene Interaction and Linkage and Mutations.

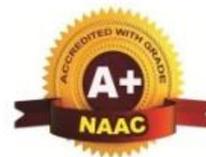
Editorial Committee

1. Smt. Prathibha K.S. MSc., B.Ed. (PhD). HoD, Assistant Professor – Chief Editor
2. Mr. Rajeev R. Potadar MSc., MPhil, KSET (PhD). Assistant Professor – Associate Editor

Semester I	Theory: BTT101: Cell Biology and Genetics Theory	
Maximum Marks: 100 (Semester End Exam:80Marks & Internal Assessment: 20Marks)		
SEP 2024	Syllabus	Link
Unit	Topic	Study Material Link
1	Introduction, Cell and cellular organelles	Link
2	Chromosomes and cell division	Link
3	Inheritance and Gene Interaction	Link
4	Linkage and Mutations	Link
SEE Jan/ Feb - 2025	Bengaluru City University Question Paper	Link
SEE Jan/ Feb - 2025	Solved BCU Question Paper 2024-25	Link
	Question Bank with Model Solved Answers	Link



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Department of Biotechnology

BSc SEMESTER – III

Study Material

The faculty of department Biotechnology have prepared the class notes to ease the student's learning process. This is an effective and collective attempt to summarize university prescribed syllabus. This will facilitate students for better understanding of concept and provide deep insight into prescribed syllabus. The present study material is supplemented with variety of fully solved examples and illustrative figures. We hope this study material fulfill the needs of the students of BSc III semester for the academic year 2025-26 under SEP 2024 onwards CBCS scheme. This study material covers the topics Introduction, Carbohydrates & Lipids, Amino acids, proteins, vitamins & Nucleic acids, Enzymes & Hormones and Bioanalytical tools & techniques.

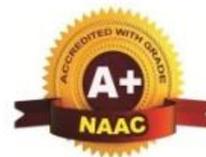
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Semester III	Theory: BTT 301 Biomolecules	
Maximum Marks: 100 (Semester End Exam:80Marks & Internal Assessment: 20Marks)		
SEP 2024	Syllabus	Link
Unit	Topic	Study Material Link
1	Introduction, Carbohydrates & Lipids	Link
2	Amino acids, proteins, vitamins & Nucleic acids	Link
3	Enzymes & Hormones	Link
4	Bioanalytical tools & techniques	Link
SEE April 2023	Bengaluru City University Question Paper	Link
SEE April 2023	Solved BCU Question Paper 2023-24	Link
	Preparatory Examination Question Paper	Link



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Department of Biotechnology

BSc SEMESTER – V

Study Material – Paper V: DSC –A9 (T) Genetic Engineering

The faculty of department Biotechnology have prepared the class notes to ease the student's learning process. This is an effective and collective attempt to summarize university prescribed syllabus. This will facilitate students for better understanding of concept and provide deep insight into prescribed syllabus. The present study material is supplemented with variety of fully solved examples and illustrative figures. We hope this study material fulfill the needs of the students of BSc V semester Paper V- Genetic Engineering for the academic year 2025-26 under NEP 2021 onwards CBCS scheme. This study material covers the topics Fundamentals of Genetic Engineering, Practices in Genetic Engineering, Applications of Genetic Engineering & Advances in Genetic Engineering and Ethics.

Editorial Committee

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2. Mr. Rajeev R. Potadar MSc., MPhil, KSET (PhD). Assistant Professor – Associate Editor

Semester V	Theory: DSC –A9 (T) Genetic Engineering	
Maximum Marks: 100 (Semester End Exam:60Marks & Internal Assessment: 40Marks)		
NEP 2021	Syllabus	Link
Unit	Topic	Study Material Link
1	Fundamentals of Genetic Engineering	Link
2	Practices in Genetic Engineering	Link
3	Applications of Genetic Engineering	Link
4	Advances in Genetic Engineering and Ethics	Link
SEE Aug/ Sept- 2023	Bengaluru City University Question Paper	Link
	Question Bank – Genetic Engineering	Link
	Model Questions and Solved Answers	Link
	Cited References	Link



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Department of Biotechnology

BSc SEMESTER – V

Study Material – Paper VI: DSC-A11 (T) Plant and Animal Biotechnology

The faculty of department Biotechnology have prepared the class notes to ease the student's learning process. This is an effective and collective attempt to summarize university prescribed syllabus. This will facilitate students for better understanding of concept and provide deep insight into prescribed syllabus. The present study material is supplemented with variety of fully solved examples and illustrative figures. We hope this study material fulfill the needs of the students of BSc V semester Paper VI- Genetic Engineering for the academic year 2025-26 under NEP 2021 onwards CBCS scheme. This study material covers the topics Plant Tissue culture methods, Transgenic Plants and biosafety, Animal Cell culture methods and Gene transfer in animals and applications.

Editorial Committee

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2. Mr. Rajeev R. Potadar MSc., MPhil, KSET (PhD). Assistant Professor – Associate Editor

Semester V	Theory: DSC-A11 (T) Plant and Animal Biotechnology	
Maximum Marks: 100 (Semester End Exam:60Marks & Internal Assessment: 40Marks)		
NEP 2021	Syllabus	Link
Unit	Topic	Study Material Link
1	Plant Tissue culture methods	Link
2	Transgenic Plants and biosafety	Link
3	Animal Cell culture methods	Link
4	Gene transfer in animals and applications	Link
SEE Aug/ Sept- 2023	Bengaluru City University Question Paper	Link
	Cited References	Link