

COURSE BROCHURE

Class 12 Biotechnology - Molecular and Cell Technology Concepts

School Education / Class 12

<p>One-time full-course fee</p> <p>INR 1,499</p>	<p>Access</p> <p>12 months course access</p>
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Study plan

**15 written lessons with exercises;
self-paced**

Learning format

15 listed written lessons with practice and self-assessment. Fifteen readings combine the preserved seven-reading Class XII biotechnology foundations with eight additive chapters. They cover molecular tools and evidence, proteins, introductory genomics/proteomics, microbial/plant/animal-cell applications and biosafety reasoning, using original paper examples plus a real NCBI/UniProt Arabidopsis dataset with complete DNA-to-protein verification. The combined course includes the earlier 40-mark practice and a new original 70-mark theory assessment with explained solutions. Mapped to CBSE 045 Class XII 2026-27 as theory and data-interpretation support; complete prescribed-text, examination and practical certification are not claimed. Not included: Further original gene-prediction, SNP/comparative-genomics, alignment and functional-genomics tool-output cases can deepen the current introductory treatment; the real rbcL retrieval does not constitute a complete bioinformatics-tool curriculum.; Additional prescribed-text-specific diagrams, protein-product case diversity, sequencing interpretation and full-paper variants remain useful; this single 70-mark paper does not cover every CBSE typology or approximately 33% internal-choice design.; Actual equipment handling, plasmid isolation, electrophoresis, DNA measurement, microbial work, viability work, practical record, project and viva require institutional teaching/evaluation; the theory supplement does not sign them off.; Learner must execute and submit the public-record retrieval/report; the author verified the worked example but cannot certify a learner performance.; The source mapping is specifically CBSE 045 Class XII 2026-27 in English.

Programme overview

Fifteen readings combine the preserved seven-reading Class XII biotechnology foundations with eight additive chapters. They cover molecular tools and evidence, proteins, introductory genomics/proteomics, microbial/plant/animal-cell applications and biosafety reasoning, using original paper examples plus a real NCBI/UniProt Arabidopsis dataset with complete DNA-to-protein verification. The combined course includes the earlier 40-mark practice and a new original 70-mark theory assessment with explained solutions. Mapped to CBSE 045 Class XII 2026-27 as theory and data-interpretation support; complete prescribed-text, examination and practical certification are not claimed.

Who this is for

- 1 Read the listed scope and prerequisites before enrolment.
- 2 A parent or guardian should manage a minor learner's account and purchase.
- 3 Not included: Further original gene-prediction, SNP/comparative-genomics, alignment and functional-genomics tool-output cases can deepen the current introductory treatment; the real rbCL retrieval does not constitute a complete bioinformatics-tool curriculum.
- 4 Not included: Additional prescribed-text-specific diagrams, protein-product case diversity, sequencing interpretation and full-paper variants remain useful; this single 70-mark paper does not cover every CBSE typology or approximately 33% internal-choice design.
- 5 Not included: Actual equipment handling, plasmid isolation, electrophoresis, DNA measurement, microbial work, viability work, practical record, project and viva require institutional teaching/evaluation; the theory supplement does not sign them off.
- 6 Not included: Learner must execute and submit the public-record retrieval/report; the author verified the worked example but cannot certify a learner performance.
- 7 Not included: The source mapping is specifically CBSE 045 Class XII 2026-27 in English; other boards/sessions or institutional prescribed-text requirements need an exact route map.
- 8 Not included: No laboratory or practical certification, school credit, diagnosis, clinical authorisation, environmental-release approval or permission to conduct unsupervised biological work is provided.
- 9 Not included: Other boards, sessions or institutional routes require their own exact mapping; completion of readings is not evidence of every learner performance or full examination readiness.

Published topics and learning focus

- 1 Recombinant DNA: a conceptual workflow and evidence
- 2 Amplification, sequence reading and measurement uncertainty
- 3 Protein structure, purification evidence and engineering
- 4 Genomics, proteomics and responsible database interpretation
- 5 Microbial growth and product recovery: interpreting data
- 6 Plant and animal cell technologies: concepts, claims and limits
- 7 Biotechnology theory assessment with worked key
- 8 Molecular evidence, protein products and public databases
- 9 Cell applications and biosafety reasoning
- 10 Integrated theory assessment

Before you choose

- 1 These are published programme highlights, not certification of complete syllabus coverage. Review the available reading index and programme trial before enrolling.
- 2 ZELVU provides learning support. It does not award the underlying degree, professional registration or an examination result.
- 3 Current checkout terms and refund policy apply. Payment and access require successful provider verification.

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purchase.