

May-2025

BLDE (DEEMED TO BE UNIVERSITY)
Master of Science in Biotechnology

[Time: 3 Hours]

[Max. Marks: 80]

III SEMESTER
PAPER – I (Plant Biotechnology)
QP CODE: 7831

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions (Any – 3)

10 X 3 = 30 Marks

1. Give an account on rapid clonal propagation.
2. Describe the techniques of manipulation of gene expression in plants.
3. Discuss the mechanism of nuclear transformation.
4. Give an account on RFLP maps based linkage analysis.

Short Essays (Any – 7)

5 X 7 = 35 Marks

5. Biolistic device
6. Markers and Reporter genes
7. Transformation of monocots
8. Engineering of plants for enhancing shelf life of fruits
9. Bt genes
10. T-DNA transfer
11. SSCP
12. Plant proteomics

Short Answers (Any – 5)

3 X 5 = 15 Marks

13. IAA
14. Somatic embryogenesis
15. Ri-plasmid
16. Chitinase
17. STS
18. Arabidopsis thaliana

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III SEMESTER
PAPER – II (Animal Biotechnology)
QP CODE: 7832

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions (Any – 3)

10 X 3 = 30 Marks

1. Describe the process of Cell Transformation and its significance in Cancer Research
2. Describe the different sources of Progenitor Cells and their Therapeutic Applications
3. Explain the role of hormones in insect and mammalian reproduction, focusing on IVF technology.
4. Describe the different types of Polymeric Biomaterials and their Applications in Medicine.

Short Essays (Any – 7)

5 X 7 = 35 Marks

5. What is the importance of Cytotoxicity Screening?
6. Explain the use of stem cell therapy in treating Parkinson's disease
7. Explain the process of humanization of Monoclonal Antibodies
8. Describe the properties of polymeric biomaterials
9. Describe the applications of biomaterials in Drug Delivery
10. How does Animal Biotechnology impact the economy at a National Level?
11. What is the Socio-Economic impact of Biotechnology?
12. Differentiate between bi-specific and bi-functional antibodies

Short Answers (Any – 5)

3 X 5 = 15 Marks

13. What is the role of Antibiotics in Tissue Culture?
14. What are the key steps in Sub Culturing Cells?
15. What are the objectives of the Human Genome Project
16. What is the role of hormones in Insect Reproduction?
17. What is the importance of Stem Cells in Tissue Engineering?
18. Name any two sources of Progenitor Cells