

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary. Answer all questions

LONG ESSAY (Answer any TWO)**2 X 20 = 40 Marks**

1. Write a note on micro-propagation and its application.
2. Describe molecular maps-RFLP, RAPD and plant chromosome analysis.
3. Explain in detail the methods of Polyploidy and Chemodemes

SHORT ESSAY (Answer any FIVE)**5 X 10 = 50 Marks**

4. Give the uses of radio isotopes and molecular markers in localization of transferred genes
5. Explain the uses of PCR in gene mapping
6. Write a detailed note on the in-vitro methods of conservation of germplasm.
7. Give the structural and molecular organization of cell and explain the regulation of gene expression.
8. Explain the methods of immobilization techniques of enzymes in detail.
9. Explain the following.
 - a) Electroporation
 - b) Auto radiography

SHORT NOTES**2 X 5 = 10 Marks**

10. Micro Injection
11. Purification of enzymes

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