

M.Sc.(Botany) CBCS Pattern Semester-III
PSDBOTT11-2 - (DSE-I) Paper-XI
Molecular Biology and Plant Biotechnology-I

P. Pages : 1

Time : Three Hours



GUG/W/23/11245

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labeled diagrams wherever necessary.

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| 1. | Describe DNA replication in prokaryotic organism. | 16 |
| | OR | |
| | Write note on. | |
| | a) Factors responsible for DNA damage. | 8 |
| | b) DNA repair system. | 8 |
| 2. | Write an essay on DNA manipulation enzymes. | 16 |
| | OR | |
| | Write note on. | |
| | a) Recombinant DNA libraries. | 8 |
| | b) Nucleic Acid Hybridization. | 8 |
| 3. | Define PCR. Explain principle and types of PCR. | 16 |
| | OR | |
| | Write note on. | |
| | a) Expression Vector. | 8 |
| | b) Transformation and transfection. | 8 |
| 4. | Define Genomics. Describe Microarray technology and give its applications. | 16 |
| | OR | |
| | Write note on. | |
| | a) Dot Plots. | 8 |
| | b) Sequence similarity. | 8 |
| 5 | Write short note on: | |
| | a) Direct Repair. | 4 |
| | b) Western Blotting. | 4 |
| | c) Ligation | 4 |
| | d) Proteomics | 4 |
