

PSDBOTT11-2 - Paper-XI : Molecular Biology and Plant Biotechnology-I

P. Pages : 1

GUG/W/22/11245

Time : Three Hours



Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagram whenever necessary.

1. Describe in detail the Messelson and Stahl's experiment which proves semi-conservative mode of DNA replication. **16**

OR

Write notes on:

- a) DNA replication protein in eukaryotes. **8**
b) Direct and mismatch repair. **8**

2. Describe general methods of gene isolation. **16**

OR

Write notes on:

- a) g DNA library. **8**
b) Nucleic acid hybridization. **8**

3. Write in detail about production of fusion protein. **16**

OR

Write notes on:

- a) PCR **8**
b) Plasmid vector **8**

4. What do you mean by alignment? Write in detail about multiple Sequence alignment. Add a note on significance of alignment. **16**

OR

Write notes on:

- a) DNA polymorphism. **8**
b) DNA Microarray. **8**

5. Write short notes on:
- a) DNA helicase. **4**
b) Oligonucleotide probe. **4**
c) DNA ligation. **4**
d) Mass spectrometry. **4**
