

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

P. Pages : 1

Time : Three Hours



GUG/W/18/11245

Max. Marks : 80

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

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

OR

Write notes on:-

- a) Factors responsible for DNA damage. 8
b) Direct and Mismatch repair. 8

2. Write an essay on the enzymes commonly used for manipulating DNA. 16

OR

Write notes on:-

- a) Southern blotting 8
b) gDNA library. 8

3. Write a detailed note on production of fusion proteins. 16

OR

Write notes on:-

- a) PCR primers 8
b) Plasmid vectors 8

4. What do you mean by alignment? Write in detail about multiple sequence alignment and add a note on significance of alignment. 16

OR

Write notes on:-

- a) Genetic polymorphism. 8
b) DNA microarrays. 8

5. Write short notes on:-
a) DNA Helicase 4
b) Slot-blot 4
c) DNA Ligation 4
d) DALI - (Distance Matrix alignment) 4
