

8. Give a detailed account of *Agrobacterium* - mediated gene transfer.

11

SECTION—C

9. Explain the following :

- (i) Episomes
- (ii) Plasmid
- (iii) Electroporation
- (iv) RT-PCR
- (v) Genomic library
- (vi) Transcription
- (vii) Immune modulator
- (viii) Mutagenesis
- (ix) Chimeric proteins
- (x) Gene shuffling
- (xi) Ti plasmid
- (xii) Expression vector
- (xiii) Hybridization
- (xiv) Gene targeting
- (xv) Agroinfection

15×2=30

Roll No.

Total No. of Pages : 2

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RECOMBINANT DNA TECHNOLOGY—BHB-24

Semester—V

Time Allowed : Three Hours]

[Maximum Marks : 74

Note :- Attempt *two* questions each from Section A and B and Section C is compulsory.

SECTION—A

- 1. Give a detailed account of enzymes used in the gene/DNA cloning and discuss their application. 11
- 2. What is the cloning vector ? Why they are necessary ? Describe the cloning vectors studied by you. 11
- 3. Discuss in detail about the gene library and its construction. 11
- 4. Write down in detail the applications of genetic engineering techniques. 11

SECTION—B

- 5. Illustrate the primer extension and PCR based methods of site directed mutagenesis. 11
- 6. What are the chimeric proteins ? Write down in detail the process of chimeric proteins. 11
- 7. Write down the different methods of plant cell transformation studied by you. 11