

BS/2051

5808/MH

R-DNA Technology

Time : 3Hours

Max. Marks: 52

Note: Attempt any TWO questions each from sections A and B. Section C is compulsory.
Total FIVE questions to be attempted.

Section A

- Q1. (a) What do you understand by Recombinant DNA Technology? 2
(b) What are vectors? ~~Discus Plasmid based vectors with suitable example.~~ 6
- Q2. (a) Discuss types and applications of Electrophoresis. 3
(b) Explain the procedure for Western Blotting. What are its applications? 5
- Q3. (a) Describe method of preparation of nucleic acid probes. 4
(b) Explain the procedure for preparing Genomic libraries. 4
- Q4. (a) Discuss retroviruses as vectors. 3
(b) How is gene amplification carried out? What are its applications in recombinant Technology? 5

Section B

- Q5. (a) Describe chemical methods of transformation of bacterial cells. 4
(b) Explain selection of *E. coli* transformants. 4
- Q6. (a) Describe Transformation of plant cells. 4
(b) Discuss applications of Genetic engineering in improvement of Industrial processes.
- Q7. (a) Discuss commercial applications of transgenic animals. 4
(b) Explain methods of transformation of yeast. 4
- Q8. (a) How recombinant DNA technology has improved drug development. 4
(b) Explain selectable markers used for Plant cell transformants. 4

Section C

Q9. Write short notes on any TEN of the following:

- Callus culture.
- SV40
- Electroporation.
- Primers
- Spheroplast
- Biosensors
- Alkaline phosphatase
- Sheep Dolly
- Herbicide resistance
- Recombinant Vaccines

10 x 2 = 20