

Seat No. : _____

XC-123

T.Y.B.Sc.

March-2013

Biochemistry

Paper – IX

(Molecular Biology & Immunology)

Time : 3 Hours]

[Max. Marks : 70

1. (a) Explain Hershey & Chase's Experiment. **6**
(b) Explain : Supercoiling of DNA. **6**
(c) Define : (i) Major groove **2**
(ii) T_m

OR

- (a) Describe briefly structure of DNA.
(b) Explain different forms of DNA.
(c) Define : Denaturation of DNA, m-RNA.

2. (a) Define and give characteristics of Genetic code. **6**
(b) Write a note on Post Transcriptional Processing. **6**
(c) Give example of termination codons. **2**

OR

- (a) Write a note on RNA processing.
(b) Write a note on Promoters.
(c) Define any **two** : Exon, Intron, core-enzyme

3. (a) Describe the gene regulation in Lac operon in prokaryotes. **6**
(b) Describe Post Translational Modification. **6**
(c) Define : (i) Mutant **2**
(ii) Hotspots

OR

- (a) Write a note on any three mutagenic agents. **7**
(b) Describe briefly the process of Translation. **7**

4. (a) Define – conjugation. Write a note on conjugation. **7**
(b) Describe method to isolate DNA **7**

OR

Explain different types of Restriction Endonucleases.

OR

- (a) Explain in detail : Vectors. **6**
(b) Describe the mechanism of Specialized Transduction. **6**
(c) Define : Transformation, Bacteriophage. **2**
5. Write any **two** in detail : **14**
- (1) Explain in detail Phagocytosis.
(2) Explain structure of Antibody with diagram.
(3) Discuss agglutination test.
(4) ELISA – As immune technique.
-