

**Bachelor of Science (B.Sc.) Semester—IV (C.B.S.) Examination**

**ZOOLOGY (Molecular Biology and Immunology)**

**Paper—II**

Time : Three Hours]

[Maximum Marks : 50]

**N.B. :—** (1) All questions are compulsory  
(2) All questions carry equal marks.  
(3) Illustrate your answers with suitable diagrams.

1. Explain recombination in bacteria by conjugation Process. 10

**OR**

Write notes on :—

(A) Types of RNA. 5  
(B) Eukaryotic gene structure. 5

2. Describe Lac operon model in detail. 10

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**OR**

Write notes on :—

(A) Wobble hypothesis. 5  
(B) Transcription. 5

3. Describe in detail various organs of the immune system. 10

**OR**

Write notes on :—

(A) Structure of Antibody. 5  
(B) Precipitation. 5

4. Explain basic concepts of Complement system with classical pathway. 10

**OR**

Write notes on :—

(A) General account of cytokines. 5  
(B) Autoimmune diseases. 5

5. Write **4-5** lines each on the following (Any **10**) :—

10

- (i) z-DNA.
- (ii) Operator Gene.
- (iii) Transduction.
- (iv) Degeneracy of Code.
- (v) Termination of Polypeptide chain.
- (vi) Directionality of replication.
- (vii) Acquired Immunity.
- (viii) Antigen.
- (ix) Agglutination.
- (x) Plasma Cells.
- (xi) Grave's disease.
- (xii) Multiple sclerosis.