

**Bachelor of Science (B.Sc.) Semester—IV (C.B.S.) Examination**  
**ZOOLOGY**  
**Paper—II**  
**(Molecular Biology and Immunology)**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) **ALL** questions are compulsory.

(2) All questions carry equal marks.

(3) Illustrate your answer with suitable diagram.

1. Explain bacterial transformation by Griffith's Experiment. 10

**OR**

Write notes on :

(A) Forms of DNA. 5

(B) Prokaryotic gene structure. 5

2. Explain Semi-conservative model of DNA replication. 10

**OR**

Write notes on :

(A) Translation in protein synthesis. 5

(B) Lac operon model. 5

3. Describe the structure and types of Antibody. 10

**OR**

Write notes on :

(A) Innate and acquired immunity. 5

(B) Agglutination. 5

4. What is Autoimmunity ? Explain Auto-immune diseases and their treatment. 10

**OR**

Write notes on :

(A) MBL Pathway. 5

(B) Cytokine related diseases. 5

5. Write 4-5 lines on the following (any **TEN**) :

- (i) mRNA
- (ii) Nucleotide
- (iii) Transduction
- (iv) Nonsense codon
- (v) Inducers
- (vi) Inhibitors of protein synthesis
- (vii) Thymus
- (viii) Epitope
- (ix) Lymph organ
- (x) Serine protease
- (xi) SCID
- (xii) Type 1 Diabetes.

10×1=10