

**Bachelor of Science (B.Sc.) Semester-IV Examination**  
**ZOOLOGY**  
**(Molecular Biology & 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. Describe the Watson and Crick's model of DNA. 10

**OR**

Write notes on :

(A) mRNA and its functions. 5

(B) Griffith's transformation experiment. 5

2. Give an account of translation mechanism of protein synthesis. 10

**OR**

Write notes on :

(A) Wobble hypothesis. 5

(B) Meselson and Stahl's experiment. 5

3. Describe in brief the structure, types and functions of antibody. 10

OR

Write notes on :

- (A) Organs of immune system. 5  
(B) Precipitation reaction. 5
4. Give an account of classical and alternative complement pathways. 10

OR

Write notes on :

- (A) Cell mediated immune response. 5  
(B) Cytokine related diseases. 5
5. Write four or five lines on the following : (any Ten) =
- (i) Operator gene
  - (ii) Z-DNA
  - (iii) tRNA
  - (iv) Structural gene
  - (v) Initiation codon
  - (vi) Bidirectional replication
  - (vii) Inflammation
  - (viii) Immunodiffusion
  - (ix) Types of antigen
  - (x) Opsonization
  - (xi) Interferon
  - (xii) Rheumatoid arthritis.

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