



TKN/KS/16-5808

**Second Semester B. Sc. Examination**

**BIOCHEMISTRY**

**Paper - II**

**(Microbiology and Immunology)**

Time : Three Hours ]

[ Max. Marks : 50

- N. B : (1) All questions are compulsory.  
(2) All questions carry equal marks.

1. Explain Nutritional classification of Bacteria.

**OR**

Explain any two methods of obtaining pure culture of Bacteria. 10

2. Write short notes on :—

- (a) Use of temperature in microbial control.  
(b) Mechanism of cell injury.

**OR**

- (a) Use of chemotherapeutic agents in microbial control.

- (b) Standardization of disinfectant. 10

3. Explain the structure of IgG in detail. 10

**OR**

Explain organ and cells of Immune system with their functions. 10

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Contd.

4. Write in brief :—

(a) Clonal selection theory. 5

(b) Applications of monoclonal Antibodies. 5

OR

(c) Describe hybridoma technology. 5

(d) Describe the alternative complement pathway. 5

5. Solve any Ten of the following :—

(i) Name any one Antibiotic. 1

(ii) Define phenol coefficient. 1

(iii) Define sterilization. 1

(iv) What are auxotrophs ? 1

(v) Name any two phototrophs. 1

(vi) Name any two chemotrophs. 1

(vii) Define Haptens. 1

(viii) Which non-covalent interactions are involved in antigen antibody binding ? 1

(ix) What is 'J' chain ? 1

(x) Which cells are involved in Humoral immunity ? 1

(xi) Write long form of HAT medium. 1

(xii) Write the long form of MAC used in complement system. 1