

**Dr. V.S. Krishna Government Degree College and PG College (A)**

**Department of Biotechnology**

**SEMESTER II**

**Course II**

**MICROBIOLOGY AND IMMUNOLOGY**

Time: 3hrs

Max Marks: 75

**Section – A**

**Answer ALL questions**

5 x 10 = 50 Marks

1. a) Write the principle, mechanism and applications of dark field and phase contrast microscopy.

OR

b) Explain the structure and classification of bacteria.

2. a) write about microbial nutrition and classification of bacteria based on nutrition.

OR

b) Explain bacteria growth curve. Write about batch and continuous culture.

3. a) Explain different organs of immune system.

OR

b) What is an immunoglobulin? Explain different types of immunoglobulins.

4. a) What is MHC? Explain different types and mechanism of MHCs.

OR

b) What is Hypersensitivity? Explain different types of it with examples.

5. a) Write in detail about different antigen-antibody reactions.

OR

b) What is Hybridoma technology? Explain monoclonal antibodies and their applications..

**Answer any FIVE of the questions:**

5 x 4 = 20 Marks

6. Plasmids
7. Structure and symmetry of viruses
8. Synthetic media
9. Methods of chemical sterilization
10. Innate immunity
11. Antigens and Antigenicity
12. Heat killed vaccines
13. ELISA

