

I. Answer the following questions: (60%) (1-6 8% each, 7 12%)

1. Describe a bacterial growth curve and discuss why a culture might have a long lag phase of growth after inoculation.
2. Give an experiment that can be used to determine microbial drug sensitivity (MIC & MLC values).
3. What is the " archaeobacteria " ? Describe the major groups.
4. List major characteristics used in classifying viruses.
5. Describe the characteristics of a bacterial plasmid and discuss the major types of bacterial plasmids.
6. What is an " Oncology " ? Give a brief description of " tumor immunity ".
7. Comparison of T cells and B cells involved in the immune response.

II. Describe the following terms or microorganisms: (40%)

1. Proton motive force
2. Prototroph
3. Replica plating
4. Spheroplast
5. Mol% G + C
6. Diauxic growth
7. Biochemical oxygen demand (BOD)
8. *Campylobacter pylori*
9. *Legionella pneumophila*
10. Bergey's Manual