



- Q.2 Answer the following questions in short. (Attempt any 10) [20]**
- i) What is Plasmid? Give its importance
  - ii) What is difference between first and second edition of Bergey's Manual?
  - iii) Define: Gnotobiotic life
  - iv) Name normal flora of eye of human body.
  - v) Give differences between exotoxins and endotoxins.
  - vi) What is LD<sub>50</sub> and LD<sub>100</sub>?
  - vii) What is Pasteurization? Give its significance
  - viii) Define : Thermal death time and Decimal reduction time
  - ix) Give the role of X-rays used as antimicrobial agents.
  - x) Define: Sanitizer and Sterilization
  - xi) Write practical applications of Quaternary Ammonium compounds
  - xii) Give the mode of action of Formaldehyde.

- Q.3 a) Briefly discuss a role of Bergey's Manual used to classify micro-organisms. [05]**  
 b) When and who gave the five kingdom concept? Give elaborative note on it. [05]

**OR**

- Q.3 a) Which major characters are used to classify micro-organisms? Explain in detail. [07]**  
 b) Write a note on Haeckel's classification. [03]

- Q.4 Write in detail the factors affecting occurrence of diseases. [10]**

**OR**

- Q.4 a) Which sources are responsible for transmission of diseases? [05]**  
 b) Describe normal flora of respiratory tract. [05]

- Q.5 a) Depict on conditions influencing antimicrobial action. [06]**  
 b) Give an account on effect of Gamma rays to micro-organisms. [04]

**OR**

- Q.5 a) Write the use of Filtration used to remove micro-organisms. [05]**  
 b) Give the use of Dry heat sterilization and Low temperature as physical antimicrobial agent. [05]

- Q.6 a) Write ideal characteristics of antimicrobial chemical agents. [06]**  
 b) How heavy metals act on growth of micro-organisms? [04]

**OR**

- Q.6 Write a note on following antimicrobial agent: [10]**  
 i) Alcohols  
 ii) Penicillins

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 (2)