

**Q.P. Code :02352**

**[Time: Three Hours]**

**[ Marks:70]**

**Please check whether you have got the right question paper.**

- N.B:**
- 1. All questions are compulsory.**
  - 2. Draw a neat labelled diagram wherever necessary.**

- Q.1** Answer the following:-
- Define angular aperture. **1**
  - Define sanitizer with example. **1**
  - Explain Decimal Reduction Time. **1**
  - Name the fungus used for positive control in sterility testing. **1**
  - Give two examples of gram negative bacteria. **1**
  - Name the causative agent of tetanus. **1**
  - Write the diagnostic test for malaria. **1**
  - Write Alexander Fleming's contribution in the field of Microbiology. **1**
  - Define glycocalyx **1**
  - Name two Rickettsial infections with the causative agents. **2**
  - Explain selective media with suitable example. **2**
  - Explain principle of Acid fast staining. **2**
- Q.2**
- Write a note on action and applications of filtration sterilization **4**
  - Discuss methods of cultivation of viruses **4**
  - Explain cultivations of anaerobic bacteria. **3**
- Q.3**
- Explain Dark field Microscopy using neat labelled diagram. Write its applications. **4**
  - Discuss moist heat sterilization with respect to method, mode of action, applications and write the biological indicators used. **4**
  - Distinguish between **(any one)** **3**
    - Bacteria and viruses.
    - SEM & TEM
- Q.4**
- Describe growth cycle of bacteria **4**
  - Write in brief mechanism of action and applications of gaseous sterilizing agents. **4**
  - Write note on **(any one)** **3**
    - Infections caused by fungi
    - Life cycle of malarial parasite.
- Q.5**
- What is pure culture? Explain any two methods of isolation of pure culture. **4**
  - How to evaluate the efficiency of a new disinfectant. **4**
  - Write a note on **(any one)** **3**
    - oncogenic viruses.
    - Asexual reproduction in fungi.

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- Q.6 a)** Draw neat labelled diagrams of :-
- i) Ray diagram of Fluorescence Microscopy.
  - ii) Gram negative cell wall.
- b) Discuss in detail morphological and nutritional characters of bacteria.
- c) Explain briefly significance of algae in pharmaceutical field.

OR

Explain the diseases caused by *Salmonella* spp.

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