

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER – 5- EXAMINATION –WINTER - 2018****Subject Code:2250002****Date: 20/11/2018****Subject Name: Pharmaceutical Microbiology & Biotechnology - I****Time:10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

- 1. Attempt any five questions.**
- 2. Make Suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Classify Bacteria based on Shape, O<sub>2</sub> requirement and Flagellar arrangement with suitable examples. **06**
- (b) Explain various Dry mount techniques for identification of Microbes. **05**
- (c) Differentiate Scanning and Transmission Electron Microscopy. **05**
- Q.2** (a) Give the reasons for the following: **06**  
i)70% alcohol is more effective than 90% alcohol ii) Meaning of “oligo” in oligodynamic action of metals iii) Instead of Straight line, Sigmoidal curve is observed in dynamics of disinfection.
- (b) Write short notes on Redial Walker test. **05**
- (c) Give a brief account on Bacterial Growth curve. **05**
- Q.3** (a) Describe the construction and working of Horizontal Autoclave with a neat labeled diagram. **06**
- (b) Explain the terms: Synchronous growth, Tyndallization, Pasteruization, Cold Sterilization and Sintering **05**
- (c) Write short notes on Sterilization using Depth Filters. **05**
- Q.4** (a) Enumerate Methods of purifying the cultures. **06**
- (b) Explain the cycle of Dormant body formation from a vegetative cell with a neat diagram. **05**
- (c) Write short notes on Virus Cultivation. **05**
- Q.5** (a) Describe the steps involved in DNA Replication. **06**
- (b) Write short notes on Triplet codon and mention the features of Genetic Code. **05**
- (c) Give a brief account on Scope of Biotechnology. **05**
- Q.6** (a) Explain immobilization techniques in detail. **06**
- (b) Write short notes on Criticism of Phenol Coefficient Tests. **05**
- (c) Give a brief account on Taxonomy of Actinomycetes. **05**
- Q.7** (a) Classify different types of media with suitable examples. **06**
- (b) Mention the Biological Indicators used for various sterilization processes and criteria for selection as Biological Indicator. **05**
- (c) Write short notes on factors affecting Disinfectants. **05**

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