



**P-014-003501**

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

**M. P. M. (Sem. V) (External - Repeater) Examination**

**November / December - 2018**

**Pharmaceutical Microbiology - I**

**Faculty Code : 014**

**Subject Code : 003501**

Time : 3 Hours]

[Total Marks : 80

**Instructions :** (1) Figure to the right indicates marks.

- (2) Answer the three (03) questions from each section.
- (3) Question one (1) and question five (5) are compulsory ".
- (4) Draw neat and clean diagrams as required.

### **SECTION – I**

**1** Write a note on following : (any **seven** out of ten)  **$2 \times 7 = 14$**

- (a) Antiseptic and Aseptic
- (b) Pasteurization
- (c) Desiccation
- (d) HEPA
- (e) Differential growth media
- (f) Fluid-B
- (g) Lophotrichous flagella
- (h) Objective lens
- (i) Importance of spread plate technique
- (j) CFU/ml

**2** Answer the following :

- (a) Write a note on a compound Microscope. What are the applications of Microscopes ? **7**
- (b) Write a note on mechanical control of microbes. **6**

**3** Answer the following :

- (a) Discuss the scope and applications of microbiology in Pharmaceuticals. **6**
- (b) Write a detail note on experiments done by Louis Pasteur. **7**

**4** Answer the following : 7

- (a) Write a note on microbial contamination and methods of prevention.
- (b) What are the roles of positive and negative controls in sterility testing ? 6

## SECTION – II

**5** Answer any **two** out of three : **7×2=14**

- (a) Write a note on microbial limit test.
- (b) Write a note on colorimetric growth detection method for sterility testing.
- (c) Write a detail note on TEM.

**6** Answer the following : 7

- (a) Write a detail note on structure of prokaryotic cells with diagram.
- (b) What do you mean by generation time? Explain the different stages of bacterial growth with labeled diagram. 6

**7** Answer the following : 7

- (a) How to classify the bacterial culture by Gram's staining technique ? Describe the morphology of the bacteria with reference to their shapes and arrangements.
- (b) Calculate the Microbicidal effect (ME) for a test in which the number of surviving organisms are 1000 and the original inoculum size was 10000000. What is the generally accepted value of ME ? 6

**8** Answer the following : 7

- (a) Describe mode of action and applications of Halogens.
- (b) Write a note on industrially important fungus. 6