



**P-16112010701050100** Seat No. \_\_\_\_\_

**M. P. M. (Sem. V) Examination**  
**November / December - 2018**  
**Pharmaceutical Microbiology - I (Theory)**

Time : 3 Hours]

[Total Marks : 80]

**Instructions :**

- (1) Answer and tie up both the sections separately.
- (2) Figure to the right indicate marks.
- (3) Answer any three (03) questions from each section.
- (4) Question one (1) and questions five (5) are compulsory.
- (5) Draw neat and clean diagrams as required.

**SECTION - I**

**1** Answer any **seven** questions out of ten, each carry  **$7 \times 2 = 14$**  two marks :

- (1) Enlist different culture transfer techniques in detail.
- (2) What is the difference between SEM and TEM ?
- (3) Enlist different discoveries of Antony Van Leeuwenhoek.
- (4) Draw a neat and clean labelled line diagram of fluorescence microscope.
- (5) What is the difference between Actinomycetes ?
- (6) What do you mean magnification power ?
- (7) Enlist contribution of Louis Pasteur in Microbiology.
- (8) Describe briefly algae.
- (9) What is the use of phase contrast microscope ?
- (10) Describe the application of TEM in detail.

**2** Answer the following :

- (a) Describe in detail scope of Microbiology. **7**
- (b) Draw a neat and clean diagram of compound microscope and describe its parts in detail. **6**

**3** Answer the following :  
(a) Write a note on Robert Koch. **7**  
(b) Write a note on cultivation of viruses. **6**

**4** Answer the following :  
(a) Differentiate eukaryotes and prokaryotes in detail. **7**  
(b) Classify nutritional media with example. **6**

## SECTION - II

**5** Answer any **two** (2) questions from the following,  **$2 \times 7 = 14$**   
each carry 7 marks :  
(a) How new disinfectant were evaluated ?  
(b) Describe in detail physical methods of sterilization.  
(c) Write a note on sterility assurance.

**6** Answer the following :  
(a) Write a note on aseptic area. **7**  
(b) Sterility testing of pharmaceutical products **6**  
are mandatory. Explain in detail.

**7** Answer the following :  
(a) Describe different methods of microbial assay **7**  
of antibiotics in detail.  
(b) What do you mean by microbial limit test ? **6**  
Why it is important ?

**8** Answer the following :  
(a) Describe in detail chemical method of sterilization **7**  
in detail.  
(b) Write a note on microbial growth curve. **6**