



JBJ-1612010701050100

Seat No. _____

**M. P. M. (Sem. V) (CBCS) (External) (W.E.F. 2016)
Examination**

December - 2019

Pharmaceutical Microbiology - I

Time : 3 Hours]

[Total Marks : 80

- Instructions :**
- (1) Figures to the right indicate marks.
 - (2) Answer the three (03) questions from each section.
 - (3) Question no. one (1) and question no. five (5) are compulsory.
 - (4) Draw neat and clean diagrams as required.

SECTION - 1

- 1** Write a note on following : (any **seven** out of ten) **2×7=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. **7**
What are the applications of Microscopes ?
 - (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 :
 - (a) Write a note on microbial contamination and methods of prevention. **7**
 - (b) What are the roles of positive and negative controls in sterility testing ? **6**

SECTION - 2

- 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 :
- (a) Write a detail note on structure of prokaryotic cells **7**
with diagram.
 - (b) What do you mean by generation time ? Explain the **6**
different stages of bacterial growth with labeled diagram.
- 7** Answer the following :
- (a) How to classify the bacterial culture by Grams staining **7**
technique ? Describe the morphology of the bacteria
with reference to their shapes and arrangements.
 - (b) Calculate the Microbicidal effect (ME) for a test in **6**
which the number of surviving organisms are 100000
and the original inoculum size was 10000000. What is
the generally accepted value of ME ?
- 8** Answer the following :
- (a) Describe mode of action and applications of Halogens. **7**
 - (b) Write a note on industrially important fungus. **6**
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