



JN-014-1043005

Seat No. _____

**Master of Pharmacy Management (Sem. III)
(CBCS) Examination**

August / September - 2019

BP - 303T : Pharmaceutical Microbiology

Faculty Code : 014

Subject Code : 1043005

Time : **3 Hours**]

[Total Marks : **75**

1 Answer all the following questions : **10×2=20**

- (1) Importance of microbiology.
- (2) Classify bacteria based on morphology.
- (3) Briefly describe sterility indicator.
- (4) Enlist different application of animal cell culture.
- (5) Enlist different methods of preservation of pharmaceutical products from microbial contamination with example.
- (6) Differentiate bacteriostatic and bactericidal actions.
- (7) Enlist different biochemical tests used in identification of bacteria.
- (8) Describe application of phase contrast microscope.
- (9) Classify microscope.
- (10) Enlist the name of contributors in the field microbiology.

2 Answer any **two** questions out of three : **2×10=20**

- (1) Classify sterilization techniques. Describe principle of each sterilization technique.
- (2) Classify viruses with example. Describe cultivation of virus.
- (3) Classify disinfectants. Write its mode of action.

3 Answer any **seven** questions out of nine : **7×5=35**

- (1) Write a note on microbial growth curve.
- (2) Describe principle, instrumentation and application of darkfield microscope.
- (3) Describe the principle of acid-fast staining.
- (4) Write a note on microbial sterility of formulation.
- (5) Describe in detail primary, established and transformed cell cultures.
- (6) Enlist different sources of microbial contamination in pharmaceutical products.
- (7) Describe the principle of different microbial assays.
- (8) Describe in detail sterility testing of sterile products according to pharmacopoeias.
- (9) Enlist different methods of evaluation of antiseptics/ disinfectants. Discuss any one in detail.
