

**B. PHARM**  
**(SEM-III) THEORY EXAMINATION 2019-20**  
**PHARMACEUTICAL MICROBIOLOGY**

Time: 3 Hours

Total Marks: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

## SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Define antiseptic and disinfectant.
b.	Differentiate microbial spoilage of pharmaceutical product.
c.	Define microbial assay with two examples.
d.	What is disinfectant with two examples?
e.	Enlist the different staining technique.
f.	Differentiate bactericidal & bacteriostatic.
g.	Define aseptic area.
h.	Define microbial contamination.
i.	Write application of cell culture.
j.	What is difference between yeast & moulds

## SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Write in detail about scope and application of pharmaceutical microbiology.
b.	Write classification and mode of action of disinfectant.
c.	Write principle, procedure & application of Ziehl Neelson staining.

## SECTION C

3. Attempt any *five* parts of the following: 5 x 7 = 35

a.	Explain ultra structure and morphological classification of bacteria.
b.	Write principle, application, advantages and disadvantages of phase contract microscopy.
c.	Explain microbial assay of erythromycin.
d.	Differentiate moist heat and dry heat sterilization.
e.	Explain different source of contamination an aseptic area and method of prevention.
f.	Explain cell cultures in pharmaceutical industry and research.
g.	Describe the concept and design of clean and aseptic area.