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B. Pharm

**(SEM 5) THEORY EXAMINATION 2017-18
(PHARMACEUTICAL & FOOD MICROBIOLOGY)**

*Time: 3 Hours**Total Marks: 100*

Notes:

SECTION A

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

- a. Differentiate between autotrophs and heterotrophs.
- b. Define probiotics with example.
- c. What do you mean by antimicrobial preservatives?
- d. Give any two difference between Optical & Electron microscopy.
- e. Describe briefly nosocomial infection.
- f. Write in short between the differences of prokaryotic & eukaryotic cell.
- g. What do you mean by aseptic area in microbiological study?
- h. Write any two differences between Gram-positive & Gram-negative bacteria.
- i. Define sterilization.
- j. Write any(**two**) difference between bacteria & virus

SECTION B

2. Attempt any three of the following: 10 x 3 = 30

- a. Classify the bacteriological filters which being used to sterilize the fluids.
- b. Describe food spoilage with types in detail.
- c. Discuss in detail about microbiological assays of any one-
Vitamin B₁₂ (or) Erythromycin.
- d. Discuss in detail about principle, working and usage of autoclave.
- e. Differentiate between antiseptic and disinfectants.

SECTION C

3. Attempt all part of the following: 5 x 2 = 10

- (a) Describe in detail about method of determination of preservative efficacy.
- (b) Enumerate the bacterial cell with neat labelled diagram.

4. Attempt all part of the following: 5 x 2 = 10

- (a) Discuss membrane filtration method for test of sterility.
- (b) Discuss clean room specification.

5. Attempt the following: 10 x 1 = 10

- (a) Describe the principle, working, limitation of electron microscope Diagrammatically.

6. Attempt any one of the following: 10 x 1 = 10

- (a) Write the procedure of sterility testing as per I.P
(OR)
- (b) Discuss the facilities required for designing aseptic area.

7. Attempt the following: 10 x 1 = 10

- (a) What do you understand by factory hygiene and how you can control Microbial contamination during manufacturing of pharmaceutical products?