

Total No. of Questions : 6]

SEAT No. :

P1978

[5145]-302

[Total No. of Pages : 2

S.Y.B.Pharmacy

**232:PHARMACEUTICAL MICROBIOLOGY AND IMMUNOLOGY
(2013 Pattern) (Semester - III)**

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Answers to the two sections should be written in separate books.*
- 3) *Figures to the right indicate full marks.*

SECTION - I

Q1) Write in details scope & Application of microbiology to pharmaceuticals.
Write a note on "Whittaker's Five Kingdom Concept". **[10]**

OR

Explain in details different techniques used for preservation of bacterial culture and write significance of prebiotic and Probiotics.

Q2) Answer the following (Any five) **[15]**

- a) What do you mean by Binary fission?
- b) Write about the contribution of Paul Ehrlich in microbiology.
- c) Differentiate between Endospore and Vegetative bacteria.
- d) Write Morphological characteristics & Importance of *saccharomyces cerevisiae*.
- e) Draw the structure of HIV.
- f) What are the advantage and Disadvantages of Pour plate techniques.
- g) Write the classification of bacteria, depending on arrangement of flagella.

Q3) Write a short note on (Any two) **[10]**

- a) Cultivation of Viruses.
- b) Major and Minor Part of Bacteria.
- c) Measurement of Bacterial Growth.
- d) Microbial Limit Test.

P.T.O.

SECTION - II

Q4) Define sterilization. Explain different methods of Sterilization with suitable example. **[10]**

OR

Explain in detail specific and nonspecific defense mechanism of host.

Q5) Answer the following (Any Five): **[15]**

- a) Define
 - i) Vaccine
 - ii) Sera
 - iii) Antigen
- b) Classify different Immunological product with suitable example.
- c) Differentiate between Active and Passive Immunity.
- d) Write advantages and disadvantages of RW Test?
- e) Why active immunization therapy is not recommend to immunodeficient person?
- f) Write Principle of ELISA test.
- g) Differentiate between CMI and HMI.

Q6) Write a short note on (Any two) **[10]**

- a) Antigen-Antibody Reaction.
- b) Chemical classification of Disinfectants.
- c) Classes of Immunoglobulin.
- d) Quality control of Vaccine.

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