

Total No. of Questions : 6]

SEAT No :

P1439

[5049]-302

[Total No. of Pages : 2

S.Y.B. Pharmacy

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

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

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

SECTION - I

Q1) Explain in detail different method used for measurement of bacterial growth.[10]

OR

Explain in detail following points.

- i) structure of HIV.
- ii) Multiplication of human viruses.
- iii) Cultivation of Virus.

Q2) Answer the following (Any Five):

[15]

- a) Explain “whittaker’s five kingdom concept”
- b) Write the classification of bacteria, depending on arrangement of flagella.
- c) Write the contribution of Louis Pasteur.
- d) List the different techniques used for preservation of bacterial culture.
- e) Write morphological characteristic and importance of *saccharomyces cerevisiae*.
- f) How will you detect presence of salmonella in nonsterile pharmaceutical preparations?
- g) Write significance of probiotics and prebiotics.

P.T.O.

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

- a) Culture Media.
- b) Growth Curve of Bacteria.
- c) Scope and Application of Microbiology.
- d) Microbial Limit Test.

SECTION - II

Q4) Define Immunity. Explain different type of immunity with suitable example. Write in brief mechanism of Humoral mediated & cell mediated immunity.[10]

OR

Explain in detail following point.

- a) Moist Heat sterilization.
- b) Phenol Coefficient test.
- c) Chemical classification of disinfectants.

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

- a) Write a principle and characteristics of antigen antibody reactions.
- b) Differentiate between Live (attenuated) and Killed vaccine.
- c) What do you mean by Microbial Virulence?
- d) Why phenol Coefficient test is invalid for bacteriostatic agent?
- e) Write note on Pasteurization.
- f) Comment “Moist heat sterilization is more superior to dry heat sterilization?”
- g) Differentiate between endotoxin and exotoxin.

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

- a) ELISA Test.
- b) Nonspecific defense mechanism of Host.
- c) Immunoglobulin.
- d) General Production of Bacterial vaccine.

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