

SECOND YEAR PHARM. D : SUMMER - 2018
SUBJECT : PHARMACEUTICAL MICROBIOLOGY

Day Saturday
Date 07/04/2018

Time **02.00 P.M. TO 05.00 PM**
Max. Marks : 70

S-2018-4027

N.B.:

- 1) **Q.NO.1 and Q.No.5 are COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw neat and labeled diagrams **WHEREVER** necessary.

SECTION – I

- Q.1** a) Answer **ANY FOUR** of the following: [08]
i) Explain contributions of Paul Ehrlich
ii) Give functions of cell wall.
iii) What is the significance of a counter stain in Gram staining method?
iv) Enlist Biological Indicators.
v) Define 'D-value' and 'Magnification Power'.
- b) Explain "Whittaker's Five Kingdom Concept". [03]
- Q.2** Discuss the structure of bacterial cell with neat labeled diagram. [12]
- Q.3** a) Explain sterility testing of injectables as per I.P. [07]
b) Give morphology and significance of *Penicillium notatum*. [05]
- Q.4** Write short notes on **ANY THREE** of the following: [12]
a) Spirochetes
b) Lytic Cycle of Viruses
c) Evaluation of disinfectants
d) Cell Mediated Hypersensitivity

SECTION – I

- Q.5** a) Answer **ANY FOUR** of the following: [08]
i) Define 'Virulence' and 'Attenuation'.
ii) Classify vaccines.
iii) Enlist non-specific defense mechanisms.
iv) Enlist limitations of Phenol Coefficient Test.
v) Enlist Non-Thermal Sterilization Methods.
- b) Differentiate between exotoxins and endotoxins. [03]
- Q.6** Describe in detail bacterial growth and its quantitative measurement. Add a note on 'Isolation of Bacteria'. [12]
- Q.7** a) Describe Microbial Assay of Antibiotics. [07]
b) How vaccines are standardized? [05]
- Q.8** Write short notes on **ANY THREE** of the following: [12]
a) HIV
b) Type II hypersensitivity
c) Maintenance of Bacterial Cultures
d) Booster Dose

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