

DOCTOR OF PHARMACY
Second Year Pharm. D. : SUMMER : 2022
SUBJECT: PHARMACEUTICAL MICROBIOLOGY

Day : Saturday
Date 07-May-2022

S-5732-2022

Time : 02:00 PM-05:00 PM
Max. Marks: 70

N.B.:

- 1) **Q. No.1 and Q. No.5 are COMPULSORY.** Out of remaining, attempt **ANY TWO** questions from Section-I and Section-II.
- 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) State Koch Postulates.
 - ii) Comment on 'MacConkey Agar is a selective bacteriological media'.
 - iii) Classify fungi with examples.
 - iv) How acids and alkalis act as a disinfectant?
 - v) Mention general features of actinomycetes.
- b) Classify rickettsial diseases along with their causes and symptoms. **(03)**
- Q.2** Define and classify sterilization techniques. Describe various sterilization methods with their mechanism, working, merits and demerits. **(12)**
- Q.3** a) Explain in detail various applications of microbiology in the field of pharmacy. **(07)**
- b) Discuss various factors affecting disinfectant action. **(05)**
- Q.4** Write short notes on **ANY THREE** of the following: **(12)**
- a) Challenge Test
 - b) Bacterial growth curve and kinetics
 - c) Lytic cycle of viruses

SECTION-II

- Q.5** a) Write test microorganisms for microbial assay of **ANY FOUR** of the following: **(08)**
- i) Gentamycin
 - ii) Amikacin
 - iii) Vitamin B₃
 - iv) Tetracycline
 - v) Pyridoxine
- b) Compare between peripheral smear and QBC tests used in diagnosis of malarial infection. **(03)**
- Q.6** Write general features of Antigen-Antibody (Ag-Ab) reactions. Classify and discuss in detail various Ag-Ab reactions with their significance. **(12)**
- Q.7** a) Classify immunity. Explain first line of defense mechanism. **(07)**
- b) Write about hybridoma technology and its applications. **(05)**
- Q.8** Write short notes on **ANY THREE** of the following: **(12)**
- a) Western Blot Test
 - b) Cell Mediated Immunity
 - c) Standardization of Vaccines