

MASTER OF SCIENCE (CHEMISTRY) (CBCS - 2018 COURSE)
M.Sc. (Chemistry) Sem-III : WINTER :- 2021
SUBJECT: MEDICINAL CHEMISTRY

Day : Friday
Date 28-01-2022

W-20153-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
 - 3) Answer to both the sections should be written in **SAME** answerbook.
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SECTION – I

Q.1 Answer **ANY THREE** of the following. **(15)**

- a) Write the structure, mechanism and SAR of Fluroquinolones.
- b) Discuss the terms Metabolite and Toxin.
- c) Define Assay. Explain in short Microbiological Assay.
- d) Explain the term Drugs and Misbranded drugs.
- e) Name the microorganism causing tuberculosis. Discuss in short first line drugs used in the treatment of tuberculosis.

Q.2 Answer **ANY THREE** of the following. **(15)**

- a) What is lethal dose? Discuss methods to find ED^{50} and LD^{50} and write the significance.
- b) Explain the term Chemotherapy.
- c) Give structure and mechanism of action of Streptomycin.
- d) Write the SAR of 4-Amino Salicylic Acid.
- e) Comment on Inhibitor and Antimetabolites.

SECTION – II

Q.3 Answer **ANY THREE** of the following. **(15)**

- a) Explain giving suitable example phase -1 reactions in drug metabolism.
- b) Write the structure for monomer of bacterial cell wall (peptidoglycan) and synthesis.
- c) Schematically explain the elongation step in protein synthesis.
- d) Write the structure and mechanism of action of Cephalexin.
- e) Write note on Antibiotics.

Q.4 Answer **ANY THREE** of the following. **(15)**

- a) Write short structure and mechanism of action of Ampicillin.
- b) Explain with the suitable example of the sulfate conjugation reaction in drug metabolism.
- c) Write the structure and role of cytochrome P450 in drug metabolism.
- d) Describe Gramicidin as Ionophore.
- e) Explain various antibacterial agents that act as inhibitors of nucleic acid.

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