

M. Sc. (Biotechnology) Sem-IV (2012 Course)(Choice Based Credit System) : SUMMER - 2019

SUBJECT: PHARMACEUTICAL AND MEDICAL MICROBIOLOGY

Day: Tuesday
Date: 09/04/2019

Time: 02.00 PM TO 05.00 PM
Max. Marks: 60

S-2019-1418

N.B:

- 1) Q. NO.1 and Q.NO.5 are COMPLSORY.
- 2) Attempt ANY TWO questions from remaining questions of each section I and section-II.
- 3) Draw well-labeled diagrams WHEREVER necessary.
- 4) Answer to both the Sections should be written in SAME Ans Book

SECTION-I

- Q.1 Explain in detail (ANY TWO): (10)
- a) Concept of bioassay of chemotherapeutic agents. Add a note on adverse drug effects of β -lactam and aminoglycoside antibiotics.
 - b) Causative agent and laboratory diagnosis of tuberculosis.
 - c) Pathogenesis of malaria
- Q.2 Write short notes: (10)
- a) Gain of function mutations
 - b) Control measures of cholera
 - c) Positional cloning
 - d) Mechanism of action of DHFR inhibitors
- Q.3 Explain in detail: (10)
- a) Production and recovery of streptomycin
 - b) Multiple drug resistance in bacteria
- Q.4 Briefly explain: (10)
- a) Therapeutic index
 - b) Loss of function mutations
 - c) Mechanism of action of drugs inhibiting nucleic acid synthesis.
 - d) Pathogenesis of candidiasis

SECTION-II

- Q.5 Explain in detail (ANY TWO): (10)
- a) Sterility testing
 - b) Pyrogen testing
 - c) Antisense technology
- Q.6 Write short notes: (10)
- a) Neutraceuticals
 - b) Adjuvants
 - c) Edible vaccines
 - d) Peptide vaccines
- Q.7 Elaborate the following: (10)
- a) Manufacturing procedure and in process control of transitional bacterial vaccines.
 - b) Regulatory aspects of QC, QM and QA in pharmaceutical industry.
- Q.8 Briefly explain synthesis of following recombinant pharmaceutical products: (10)
- a) Factor VIII
 - b) Insulin
 - c) Anticoagulants
 - d) Vaccine vectors