

**M. SC. (BIOTECHNOLOGY) SEM-IV (2012 COURSE)(CHOICE
BASED CREDIT SYSTEM) : WINTER - 2017**
**SUBJECT: SPECIALIZATION: c) PHARMACEUTICAL & MEDICAL
MICROBIOLOGY**

Day: **Wednesday**
Date: **01/11/2017**

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

W-2017-0977

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining 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 labelled diagrams **WHEREVER** necessary.

SECTION-I

- Q.1** Explain in brief: **(10)**
i) Functional cloning ii) Loss of function mutations
iii) Therapeutic index iv) Epidemic and pandemic
- Q.2** a) Explain in detail antigenic properties of Salmonella. What are the methods of lab diagnosis of typhoid? **(05)**
b) What are chemotherapeutic agents? Explain the mechanism of action of β -lactam antibiotics. **(05)**
- Q.3** Write short notes on: **(10)**
i) Positional cloning ii) Cholera toxin
iii) MIC iv) Biofilms and drug resistance
- Q.4** Elaborate:
a) Pathogenesis, epidemiology, lab diagnosis, treatment and prevention of amebiasis. **(05)**
b) Production of streptomycin **(05)**

SECTION-II

- Q.5** Explain in brief: **(10)**
i) Peptide vaccine ii) Pyrogen testing
iii) Recombinant insulin iv) Edible vaccines
- Q.6** Explain in detail:
a) Manufacturing procedure and in-process control of traditional bacterial vaccines. **(05)**
b) Different methods for gene therapy. **(05)**
- Q.7** Write short notes on: **(10)**
i) Nutraceuticals ii) Adjuvants
iii) Antisense technology iv) Vector vaccines
- Q.8** Elaborate: **(10)**
i) GMP and GLP pharmaceutical industry
ii) Sterility testing of pharmaceutical products