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

Time: 02.00 PM TO 05.00 PM Day: Wednesday Date: 01/11/2017 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** 0.1 Explain in brief: (10)i) Functional cloning ii) Loss of function mutations iii) Therapeutic index iv) Epidemic and pandemic Explain in detail antigenic properties of Salmonella. What are the methods of (05) **Q.2** lab diagnosis of typhoid? What are chemotherapeutic agents? Explain the mechanism of action of β - (05) b) lactam antibiotics. Q.3 Write short notes on: (10)i) Positional cloning ii) Choleragen iii) MIC iv) Biofilms and drug resistance **Q.4** Elaborate: Pathogenesis, epidemiology, lab diagnosis, treatment and prevention of (05) a) amebiasis. Production of streptomycin b) (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: Manufacturing procedure and in-process control of traditional bacterial (05) 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