

SEMESTER-III

Paper S-3052

Medicinal Chemistry-I

Time: 3 Hrs.

M.M. 75 marks

Note: The paper will be divided into two sections.

Section-A One question with 10 parts (short answer word limit 20) spread over whole syllabus. Each part will be of 1 mark and candidate is required to attempt all the ten parts

Total 10 marks

Section-B Five questions (answer not exceeding 500 words) are from each Unit with internal choice will be asked and the candidate is required to attempt all five questions. Each question will be of 13 marks

Total 65 marks

Unit-I

Drug Design: Rational approach to drug design, methods of variation, tailoring of drugs.

Physical and Chemical factors: factors governing the biological activities of drugs, physical properties, dissociation constants, chemical properties, isosterism and bio-isosterism.

Unit-II

Antipyretics and Analgesics : Salol, Cinchophen, Aminopyrine, Livorphanol, Peethidine.

Antivirals: Methisazone, Idozuridine.

Unit-III

Hypnotics and Sedatives: Barbiturates, Phenobarbitone, Nitrazepam, Gluethimide and their mode of action.

CNS stimulants: Caffeine, Ethamivan, Phentermine, and their mode of action.

Unit-IV

Cardiovascular agents: Introduction, Classification, Cardic glycosides, antihypertensive and hypotensive drugs, antiarrythanic agents, Vasopressor drugs, resin angiotensin pathway.

Antihistaminics: Classification, structure activity relationship and synthesis of promethazine, Phenindamine, Chlorophenamine.

Unit-V

Antimalarials: Classification, quinine, 4-amino-quinoline and 8-aminoquinoline analogues, guanidines, biguanides, pyrimidine drugs, miscellaneous drugs.

Antibiotics: Introduction, Classification, -lactam antibiotics, penicillines, β cephalosporins, chloramphenicol, tetracyclines.