

M.Sc. (Chemistry) (NEP Pattern) Semester-III
STPG03CHE05 Paper-IV - Medicinal Chemistry-I

P. Pages : 2

Time : Three Hours



GUG/S/25/15964

Max. Marks : 40

1. a) Write a note of significance of drug metabolism in medicinal chemistry. 4
Give a detail account of use of computer in drug design.

b) Give synthesis and uses of : i) Methyl dopa. 4

OR

c) Write a short note on cardiovascular diseases. 2

d) Give synthesis and mode of action of amyl nitrate. 2

e) Write a note on prodrugs. Give the different phases in Producing Action. 2

f) Give the synthesis of Verapamil. 2

2. a) Write the synthesis, uses and side effects of Thiotepa and Melphalan. 4

b) What are type I and type II diabetes? 4

OR

c) Explain the term Cancer? What are the different types of Cancer. 2

d) Give the synthesis of Ciglitazone. 2

e) Explain the role of thiazolidinediones in diabetic control. 2

f) Write the role of antimetabolites in the treatment of Cancer. 2

3. a) Explain the synthesis and uses of following: 4

i) Sulphonamides

ii) Phenylbutazenes

b) What are diuretics? Give the synthesis of : i) Bumetanide. 4

OR

c) What are analgesic drugs? Give the uses and mode of action of phenacetin. 2

d) Write down the synthetic pathways of isoniazid. 2

e) Explain the synthesis and uses of ethacrynic acid. 2

f) Give the synthesis of frusemide. 2

4. a) What are barbiturates? Give their classification. 4
- b) Discuss the factors affecting coagulation and anti coagulation. 4

OR

- c) Write a note on Central Nervous System (CNS) depressants. 2
- d) Discuss the structure of vitamin k_2 . 2
- e) Give synthesis and uses of coumarins. 2
- f) Give synthesis and side effects of ethosuximide. 2

5. Attempt **any eight**. 1x8
=8

- a) Explain the term Biological Response of drugs.
- b) Write down the structure of Thiopental.
- c) Define the terms Analgesia and antipyretic with suitable examples.
- d) Give any four antineoplastic agents in treatment of Cancer.
- e) Write down the structure and uses of Norfloxacin.
- f) Write structure of heparin.
- g) Define Antipyretic with suitable examples.
- h) Define ideal drug.
- i) Write any two examples of CNS stimulant drugs.
- j) What is meant by antipyretic drugs.
