



Code No. : 887

FACULTY OF SCIENCE
M.Sc. IV Semester Examination, April/May 2013
ORGANIC CHEMISTRY
(Paper – II) 402 : Mechanism of Action of Drugs

Time: 3 Hours]

[Max. Marks: 80

Note : Answer all questions.

SECTION – A

(4×8=32 Marks)

1. a) What are agonists and antagonists ? Explain with two examples of each.
b) Explain the folate metabolism in bacteria.
2. a) Give the synthesis of sulfomethoxazole.
b) Write the structure of the following :
 - 1) Clavulanic acid
 - 2) Amethocaine
 - 3) Cephalosporin – C
3. a) Name two important anti cancer drugs and write the synthesis of any one of them.
b) Formulate the synthesis of ciprofloxacin and mention its medical importance.
4. a) Write the synthesis and pharmacological activity of chlorpromazine.
b) Explain the pharmacological activities of salbutamol and propranolol.

SECTION – B

(4×12=48 Marks)

5. a) Explain different types of classification of drugs with suitable examples.
b) Write briefly about human immune system including its function.

OR

- c) What are neurans ? Describe the nervous system.
- d) Write a short note on :
 - i) Enzyme inhibition
 - ii) Ion channels

6. a) Give one synthesis of the following drugs : (4×3=12 Marks)

- i) Trimethoprim
- ii) Penicillin
- iii) Cefalexin

OR

- b) i) Dapsone
- ii) Nefidipine
- iii) Cycloserine

(4×3=12 Marks)

7. a) How chloromycetin is synthesised and explain its pharmacological action ?
 b) What are DNA-polymerase inhibitors ? Give two examples and write the synthesis of any of them.

OR

- c) Write the structural formula of rifamycins and mention their medical importance.
- d) Write the synthesis of :
 - i) Tinidazole
 - ii) Norfloxacin

8. a) Write the structural formula of the atropine and nicotine and explain their biological activity.
 b) Explain the role of immune system and its importance.

OR

- c) What is the biological significance of amino acid receptors ? Outline the synthesis of baclofen.
- d) How the ranifidine is synthesised ? Explain their pharmacological action.
