

IV Semester M.Sc. Degree Examination, June 2017
(NS) (2010-11 Scheme) (Repeaters)
CHEMISTRY
C-404 OC : Medicinal Organic Chemistry

Time : 3 Hours

Max. Marks : 80

Instruction : Answer question 1 and any five of the remaining.

1. Answer any ten of the following : (10×2=20)
- What are agonists and antagonists ? Give examples.
 - Define prodrugs and soft drugs with suitable examples.
 - Mention the factors which enhance the bioactivity of drugs.
 - How Diel's hydrocarbon is formed ? What is its significance ?
 - Write the major photoproducts of ergosterol.
 - Write the structure of streptomycin. Name its three components.
 - What are oral contraceptives ? Give examples.
 - Write the mechanism of action of paracetamol.
 - Explain mode of action of sulphonamides.
 - Write the synthesis of dapsone.
 - Mention the functions of neurotransmitters.
 - How is methyldopa synthesized ?
2. a) Discuss induced-fit theory.
b) Explain Hansch equation.
c) Write a note on computer-aided drug design. (4+4+4=12)
3. a) How was the nature of side chain established in cholesterol ?
b) Outline the synthesis of progesterone from diosgenin.
c) Write the synthesis of androsterone. (4+4+4=12)



4. a) How penicillin is synthesized ?
b) Elucidate the structure of cephalosporin-c (synthesis not required).
c) Discuss the structural relationship between terramycin, aureomycin and tetracycline. (4+4+4=12)
5. a) Explain use of Barton reaction for the synthesis of aldosterone.
b) How was the size of ring A of steroids established ?
c) How ID_{50} and IC_{50} values are determined ? (4+4+4=12)
6. a) Write a note on recent development in cancer chemotherapy.
b) Outline the synthesis of acyclovir.
c) Explain causes of cardiovascular diseases. (4+4+4=12)
7. a) Write the synthesis of ciprofloxacin.
b) Discuss neurochemistry of mental diseases.
c) Outline the synthesis of phenobarbital. Mention its mode of action. (4+4+4=12)

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