
 IV Semester M.Sc. Degree Examination, June/July 2014
 (NS)
 (2010-11 & Onwards Batch)
CHEMISTRY
 C - 404 - OC : Medicinal Organic Chemistry

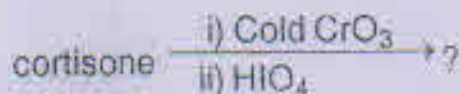
Time : 3 Hours

Max. Marks : 80

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

1. Answer **any ten** of the following. (10×2=20)

- a) List the various types of drug receptor interactions.
- b) Differentiate between hard and soft drugs.
- c) Explain the terms ID_{50} and IC_{50} .
- d) Predict the product in the following cholesterol $\xrightarrow[\text{Isopropoxide}]{\text{Aluminium}}$?
- e) Progesterone undergoes haloform reaction. What it indicates ?
- f) Predict the product in the following



- g) Explain the mode of action of antipyretics.
- h) Why a drug having a short-term excitation of CNS is preferred over the one having a long term effect ? Explain with specific example.
- i) What are antihistamines ? Explain their mode of action.
- j) What are antimetabolites ? Give examples.
- k) Predict the product/(s).



- l) Give the classification of cardiovascular drugs.



2. a) Explain the various factors governing drug-design.
 b) Discuss the occupancy theory of drug activity.
 c) Write briefly on computer aided drug design. (5+4+3)
3. a) How is the presence of angular methyl group in estrone established?
 b) What is Blanc's rule? Mention its application in steroid chemistry.
 c) How are the position of hydroxyl group and the double bond established in cholesterol? (4+4+4=12)
4. a) How is benzyl penicillin synthesized?
 b) How the structure of streptomycin was established? (6+6=12)
5. a) Explain the mechanism of action of cardiovascular drugs taking suitable examples.
 b) Give the synthesis of:
 i) Phenylbutazone ii) Zidovudine (5+4+3)
6. a) Explain briefly the role of hormones and their antagonists as anticancer agents.
 b) Give the synthesis of:
 i) Chloroquin ii) 6-mercaptopurin (5+4+3)
7. Write briefly on:
 i) Anti-TB chemotherapy
 ii) Barton reaction
 iii) Generics and analogues. (4+4+4)

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Time :
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 a) I
 b) V
 c) E
 d) F
 e) G
 f) D
 g) S
 h) D
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 k) Ex
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 2. a) Dis
 b) Out
 c)
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