



Code No. : 9524

FACULTY OF SCIENCE
M.Sc. IV Semester Examination, May/June 2012
ORGANIC CHEMISTRY
Paper – I (401) Drug Discovery

Time: 3 Hours]

[Max. Marks : 80

Note: Answer *all* questions.

PART – A

(4×8=32 Marks)

1. a) Discuss the Serendiptons discovery of leads.
b) Write a note on “me too” drugs.
2. a) What is bioisosterism ? Illustrate with examples.
b) How does ring variation and rigidification of structure help in lead modification ?
3. a) What is Taft equation ?
b) Discuss the significance of Hammett equation.
4. a) Write a chiral synthesis of (S) – naproxen.
b) What are resins and linkers ? Give examples.

PART – B

(4×12=48 Marks)

5. a) Illustrate with examples the principles of prodrug design.
b) What are folklore drugs ? Give examples.

OR

- c) Explain the importance of structure pruning technique in lead modification.
d) Discuss the salient features of pharmacokinetics.

6. a) Give an account of the discovery of captopril.
b) Discuss SAR studies in taxol analogues.

OR

- c) Describe the important stages in the discovery of cimetidine.
d) Write about SAR studies in benzo diazepines.



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7. a) Discuss the importance of lipophilicity constant in QSAR studies.
b) Write a note on cluster analysis.

OR

- c) Discuss the utility of Topliss scheme in lead modification.
d) Give an account of Hansch analysis.

8. a) Describe the Houghton's tea bag procedure.
b) Outline the importance of spectral methods in characterisation of synthetic libraries.

OR

- c) Outline the synthesis of (S) propranolol and (S) ibuprofen.
d) Discuss the combinatorial solid phase peptide synthesis of a tripeptide.
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