Rajiv Gandhi University of Health Sciences

First Year M. Pharm Degree Examination - May 2016

[Time: 3 Hours] [Max. Marks: 100]

Medicinal Chemistry – I (Drug Design)

(Revised Scheme 4)

Q.P. CODE: 9347

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any TWO) **2 X 20 = 40 Marks**

1. Explain various steps involved in developing a QSAR model and discuss the steric parameters used in a QSAR.
2. a) Explain the rational design of non-covalent and covalent binding enzyme inhibitors.
   b) Describe enzymes inhibitors as transition state analogs. (12+8)
3. Write notes on:
   a) Conformational analysis
   b) Virtual screening
   c) Aromatase inhibitors
   d) HIV-Protease inhibitor (5X4)

SHORT ESSAY (Answer any FIVE) **5 X 10 = 50 Marks**

4. Discuss the design and development of prodrugs with two specific examples.
5. Explain the different non-covalent forces involved in drug receptor interaction.
6. Give an account of various protein-ligand docking techniques and their importance in drug discovery.
7. Define the terms - receptor, agonist, partial agonist and antagonist. Discuss drug-receptor interaction theories.
8. With suitable examples, explain the applications of recombinant DNA technology in pharmacy.
9. What is a lead molecule? Discuss the various stages involved in identification of a lead molecule.

SHORT NOTES **2 X 5 = 10 Marks**

10. Write a note on development of t-PA as a therapeutic agents.
11. What is epitope mapping? Give the importance of epitope mapping in drug design.

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