Total No. of Questions : 8] *[Total No. of Printed Pages : 1*

Roll No .....

MPY-204(PCH)

M.Pharmacy II Semester Examination, June 2020

Drug Design

Time : Three Hours

Maximum Marks: 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Give an account of historical perspectives of drug discovery and development. 7
   b) What is lead compound? How lead compounds are generated in drug discovery? 7

2. a) Discuss briefly the applications of thermodynamic methods in drug design. 7
   b) Discuss the methods for measuring thermodynamics of bio-molecular interactions. 7

3. a) What is structure-aided drug design process? Discuss a case study on structure-aided drug discovery. 7
   b) How quantum mechanics and molecular mechanics are useful in drug design? 7

4. a) What is Bioisosterism? Explain different types of bioisosterism and how it is useful in drug discovery? 7
   b) Why stereochemistry is important in drug design? Explain with suitable examples. 7

5. a) What is ligand-based drug design? Discuss the concept pharmacophore and generation of pharmacophore hypothesis. 7
   b) Discuss different software used in ligand-based and structure-based drug design. 7

6. a) Define QSAR. Give a detailed account on Hansch QSAR analysis. 7
   b) Discuss the physiochemical properties used in Hansch QSAR analysis. 7

7. a) Discuss Pharmacophore identification and its application in drug discovery. 7
   b) Classify 3D-QSAR methods and add a note on CoMFA method. 7

8. Write short notes on any two: 14
   a) Nucleic acids as drug targets
   b) Thump rules and its application in drug discovery
   c) Drug-nucleic acid interaction.

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