

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot
Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER - 2017

M.Sc. Organic Chemistry

16PCEOC02 - FUNDAMENTALS OF MEDICINAL CHEMISTRY

Duration of Exam – 3 hrs

Semester – III

Max. Marks – 70

Part A (5X2= 10 marks)

Answer **ALL** questions

1. What is High-Throughput Screening?
2. Define the following terms:
 - i) Drugs
 - ii) Structure-activity relationship (SAR)
3. Enlist different physiological barrier to distribution of Drugs.
4. Define Drug distribution and enlist factors affecting drug distribution.
5. What is QSAR?

Part B (5X5= 25 marks)

Answer **ALL** questions

- 6a. Explain Reduction and hydrolysis reaction for Biotransformation of drug.

OR

- 6b. Explain the drug discovery through Clinical observations

- 7a. Explain conjugation reaction in Drug metabolism.

OR

- 7b. Draw the flow chart and Stepwise diagram of drug discovery processes.

- 8a. Explain prodrug with classification and enlist utility of prodrug.

OR

- 8b. What are the advantages and disadvantages of SPOS?

- 9a. Explain the drug discovery of Penicillin.

OR

- 9b. Explain Occupation theory of receptor in detail.

- 10a. Differentiation between drug discovery through Traditional approach and Rational approach.

OR

- 10b. Explain any two steric parameters used in QSAR.

Part C (5X7= 35 marks)

Answer **ALL** questions

11a. Discuss pool and split method used in combinatorial chemistry.

OR

11b. Describe the Topliss decision tree is used in drug design.

12a. Explain utility of prodrug to increase aqueous solubility, site specificity and stability of drug.

OR

12b. Explain electronic parameters used in QSAR studies with examples.

13a. What are membrane- bound receptors? Explain G-protein coupled receptor in detail.

OR

13b. Discuss the discovery of Librium.

14a. Explain oxidation reaction in metabolism of drug with importance of Cytochrome P-450.

OR

14b. What are pharmacophore and auxophore? How to increase potency of morphine with the modification of auxophoric part of the drug?

15a. What is Craig's Plot? How it is used in drug design.

OR

15b. Explain Lipophilic parameters used in QSAR studies.
