

**PARUL UNIVERSITY**  
**FACULTY OF PHARMACY**  
**B.Pharm Winter 2019-20 Examination**

**Semester: 8****Subject Code: 08101451****Subject Name: Pharmaceutical Chemistry-X (Medicinal Chemistry-IV)****Date: 19/10/2019****Time: 10:00am to 01:00pm****Total Marks: 75****Instructions:**

1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

**Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) (20)**

1. Write Classification, SAR, mechanism of action and use of Thiazide and Loop Diuretics.
2. Write Classification, SAR, mechanism of action and use of Anti-hyperlipidemic agents.
3. Discuss Chemistry of ACE inhibitors and beta blockers used for hypertension treatment.

**Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) (35)**

1. Discuss any two methods to calculate the physicochemical parameters of QSAR.
2. Write a note on membrane stabilizing agent for arrhythmia treatment.
3. Discuss classification of cardiotonic agents.
4. Discuss SAR of HMG Co-A reductase inhibitors.
5. Write brief note on nitrate derivative use for treatment of angina pectoris.
6. Explain Hansch Analysis and Free-Wilson analysis in detail.
7. Discuss selective optimization of side activities (SOSA) approach.
8. Write a note on de novo drug design.
9. Discuss High-Throughput screening (HTS) in detail.

**Q.3 Answer in short. (2 marks each) (20)**

1. Write brief note on Combinatorial Chemistry.
2. Write a brief note on angiotensin-II antagonist.
3. Outline synthesis of Nitroglycerin.
4. Outline synthesis of Captopril.
5. Outline synthesis of Amlodipine.
6. Define pharmacophore with example.
7. Write full form of CoMFA and CoMSIA.
8. What are the various in-silico virtual screening tools used in drug design ?
9. Define molecular docking. Enlist various docking methods.
10. Outline synthesis of Atenolol.