Seat No.:	Enrolment No.

Subject Code: 2920201

(c)

geometrical isomers.

GUJARAT TECHNOLOGICAL UNIVERSITY M. Pharm - SEMESTER- II • EXAMINATION - SUMMER 2017

Date: 31/05/2017

05

Subject Name: Drug Design and Discovery Time: 10:30 AM to 01:30 PM **Total Marks: 80 Instructions:** 1. Attempt any five questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. What is high throughput screening? Give importance & uses of HTS with 06 **Q.1** (a) example. How SAR is useful to optimization of different features of lead compound. 05 **(b)** Explain structure based drug design. How NMR & X-ray crystallography helps 05 in SBDD. **Q.2** (a) Discuss the importance of drug design concept in drug discovery. 06 Explain the following terms **(b)** 05 1. Bio- iso-sterism. 2. Quantum Mechanics. Explain in detail Hansch LFER Model. 05 (c) OR Write a note on "How to evaluate QSAR Model". Write down various targets for drug action. Explain Enzyme inhibition. Q.306 (a) Write a note on 3D QSAR. 05 **(b)** What is force field in molecular modeling? Explain with examples. (c) 05 Define combinatorial chemistry. Write down types of combinatorial synthesis. 0.4 (a) 06 Explain Solid phase synthesis in detail. Write a short-note on CADD. 05 **(b)** What do you mean by Energy minimization? Explain importance of molecular 05 (c) modeling. 0.5 Write short note on ligand base drug design. 06 (a) Define Virtual Screening. Write down various approaches of virtual screening. **(b)** 05 Explain Docking process. Role of Docking in virtual screening. 05 (c) **Q.** 6 Enlist the physicochemical parameters of QSAR. How to calculate the log P 06 (a) value of Aspirin. **(b)** What is Pro-drug? What is the importance of pro-drug in drug design? 05 What is De-novo drug design? Explain Strategies used in De-novo design. (c) 05 Enlist pharmacokinetics parameters used in drug design. How absorption of **Q.7** 06 (a) drug/molecule affect in drug design. Discuss the process of drug discovery in detail. 05 **(b)**

What is analog design? Discuss the strategy of analog design by making