

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER – 8- EXAMINATION –WINTER - 2018**

**Subject Code: 280003****Date: 19/11/2018****Subject Name: Pharmaceutical Chemistry-X (Medical Chemistry)****Time: 02:30 PM TO 05:30 PM****Total Marks: 80****Instructions:**

- 1. Attempt any five questions.**
- 2. Make Suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Define and classify diuretics. Write a note on loop diuretics. **06**  
(b) Sketch the important steps in synthesis of (i) Ethacrinic acid (ii) Furosemide. **05**  
(c) Explain in detail the steric and electronic parameters used in QSAR. **05**
- Q.2** (a) Write the structure, its ring system, mechanism of action, metabolism and side effects of any one catecholamine depletory used as antihypertensive. **06**  
(b) Sketch the important steps in synthesis of (i) Lignocaine (ii) Flecainide. **05**  
(c) Write a note on arterial and venous vasodilators. **05**
- Q.3** (a) Define molecular modeling and write a note on application of Computer Aided Drug Design technique. **06**  
(b) Outline the SAR of cardiotonics. **05**  
(c) Define QSAR and write a note on Hansch Linear Free Energy Relationship model. **05**
- Q.4** (a) Define antihypertensive agents with its classification and write a note on calcium channel blockers. **06**  
(b) Sketch the important steps in synthesis of (i) Captopril (ii) Clofibrate. **05**  
(c) Explain the SAR of 1,4-Dihydro pyridines. **05**
- Q.5** (a) What is Free Wilson Mathematical Model? Explain it. **06**  
(b) Enlist the centrally acting adrenergic drugs with structures used as antihypertensives. **05**  
(c) Enumerate different methods of lead discovery. Write a short note on optimization of lead. **05**
- Q. 6** (a) Write a note on plasma volume expanders and antiobesity drugs. **06**  
(b) What is the mechanism of action and SAR of ACE inhibitors? **05**  
(c) Define cardiotonic drugs. Write classification with structures. **05**
- Q.7** (a) Discuss the mechanism of action and SAR of 5-Sulfamoyl benzoic acid derivatives. **06**  
(b) Write a note on combinatorial chemistry. **05**  
(c) Write in detail giving examples the role of antiplatelet agents. **05**

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