

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.**

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| 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 |
