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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