Seat No.: _____ *Enrolment No.*_____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. - SEMESTER–VIII • EXAMINATION – SUMMER -2018

Subject code: 280003 Date: 02/05/2018

Subject Name: Pharmaceutical Chemistry-X (Medicinal Chemistry)

TIME: 10:30AM TO 01:30PM 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)	Write synthesis of warfarin, carvediol, acetazolamide.	**06**
	(b)	Discuss SAR of ACE inhibitors and dihydropyridines	**05**
	(c)	Write a note on antiplatelet agents.	**05**
Q.2	(a)	Write synthesis of metoprolol, clofibrate, hydrochlorthiazide.	**06**
	(b)	Define artial tachycardia and artial flutter. Classify antiarrhythmic agents with chemical structures and mechanism of action.	**05**
	(c)	Write a note on plasma expanders.	**05**
Q.3	(a)	Write synthesis of lignocaine, hydralazine, glyceryl trinitrate	**06**
	(b)	Discuss SAR of following: (i)HMG CoA reductase inhibitors. (ii)Thiazide diuretics	**05**
	(c)	Write a note on thrombolytic agents	**05**
Q.4	(a)	Discuss cardiotonic agent in detail. Give SAR of cardiac glycoside.	**06**
	(b)	Define hyperlipoproteinemia. Classify anti-hyperlipidemic agents with chemical structures and mechanism of action. Discuss in brief bile acid sequestrants.	**05**
	(c)	Describe antiobesity agents in detail.	**05**
Q.5	(a)	Give one name of drug with its chemical structure of following: (i) Centrally acting antihypertensive agent (ii) ACE inhibitor (iii) Peripheral antiadrenergic agent (iv) Direct vasodilator (v) Antiarrhythmic agents (Class 1B) (vi) Xanthine diuretic.	**06**
	(b)	Write a note on carbonic anhydrase inhibitor and aldosterone antagonist.	**05**
	(c)	What is angina pectoris ? Classify anti-anginal agents with chemical structures and mechanism of action.	**05**

Q. 6	(a)	Draw chemical structure and give pharmacological category of following drugs(any six): (i)Furosemide (ii) Flecainide(iii) Methyl dopa(iv)Nicorandil (v) Nifedipine (vi) Dicoumarol(vii) Triamterene (viii)Mannitol	**06**
	(b)	Write a note on selective α_1 adrenergic receptor antagonist and mixed α and β blockers.	**05**
	(c)	What is combinatorial chemistry? Write note on solid phase synthesis and give applications of combinatorial chemistry.	**05**
Q.7	(a)	Enlist methods used in QSAR analysis. Explain hansch model and free wilson mathematical model.	**06**
	(b)	Write a note on optimization of lead.	**05**
	(c)	Define QSAR. Give its advantages and disadvantages. Enlist different parameters used in QSAR.	**05**

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