Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM.-SEMESTER–VI- EXAMINATION –SUMMER-2017

Subject code: 260004 **Date: 05/05/2017**
Subject Name: Pharmaceutical Chemistry-VIII (Medicinal Chemistry)
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.**

Q.1 (a) Comment on following statements: **06**
1. The more bulky the substituent on nitrogen, α-receptor activity decreases and β-receptor activity increases in adrenergic series.
2. Barbituric acid itself is pharmacologically inactive but barbiturates are used as hypnotic and sedative drugs.
3. Rofecoxib is a selective cox-2 inhibitor but it should be contraindicate with antihypertensive agents.

(b) Give synthetic route of Ephedrine and Neostigmine. **05**

(c) Define adrenergic antagonists, classify it with suitable examples. **05**

Q.2 (a) Define and classify antiepileptic drugs. Discuss SAR of Benzodiazepines. **06**

(b) Discuss drugs used in treatment of gout. Give synthesis of allopurinol. **05**

(c) Outline synthesis of Meprobamate and Halothane. **05**

Q.3 (a) Define and classify CNS stimulants. Write synthesis of amphetamine. **06**

(b) What is Parkinson disease? Discuss various class of drugs used in treatment of Parkinson disease. **05**

(c) Explain with suitable example, how the following functional group containing drugs are functionalized and then conjugated. (Any Two) **05**
1. Ester 2. 2˚ alcohol 3. 3˚ amine

Q.4 (a) Write short note on the following. (Any Two) **06**
1. Neuromuscular blocking agents
2. Factors affecting drug- receptor interaction
3. Cognition enhancers

(b) Classify anticholinergic agents and discuss SAR of cholinergic blocking agents. **05**

(c) What are parasympathomimetics? Classify them with suitable examples. **05**

Q.5	(a)	Define and classify NSAID's with suitable structures. Give synthesis of Aspirin.	**06**
	(b)	Discuss the SAR of phenothiazine.	**05**
	(c)	Discuss importance of CYP450 in xenobiotics metabolism.	**05**
Q. 6	(a)	Write short note on the following. 1. SAR of Phenylethanolamines 2. Drugs used in Alzheimer's disease	**06**
	(b)	Define and classify antidepressant agents. Discuss SAR of tricyclic antidepressants.	**05**
	(c)	Define opioid analgesic drugs. Explain SAR of meperidine series.	**05**
Q.7	(a)	Define and classify local anesthetic agents. Discuss SAR of ester containing anesthetic drugs.	**06**
	(b)	Define and classify sedative and hypnotics. Give the method of synthesis of Thiopental sodium.	**05**
	(c)	Explain about following theory of receptor. 1. Occupational Theory 2. Induced fit theory	**05**

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