

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. **06**
 - 1. SAR of Phenylethanamines
 - 2. Drugs used in Alzheimer's disease
 - (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. **05**
 - 1. Occupational Theory
 - 2. Induced fit theory
