

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2016****Subject Code:2163601****Date: 13/05/2016****Subject Name: Medicinal Chemistry-I****Time:10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Describe the structural activity relationship amongst H₁ receptor antagonist with suitable examples wherever required. **07**
- (b) Outline the synthesis of Physostigmine. **07**
- Q.2** (a) (i). What are Cardiovascular drugs? Write a note on cardiac glycosides with structures. Write the mechanism of action of these glycosides. **04**
- (ii). Write the synthesis of any one of the following antisympathetic drug with a brief process- (1) Propranolol Hydrochloride, (2).Metoprolol Tartrate, (3). Atenolol **03**
- (b) Outline the synthesis of (1). Phenobarbital, (2). Glutethamide **07**
- OR**
- (b) How will you classify the Sympathomimetic agents on the basis of chemical structure? Write one example with structure from each class. Outline the synthesis of any one Catecholamine. **07**
- Q.3** (a) (i).What are diuretics? What are the classifications of diuretics? Give an example of Mercurial diuretics with its structure. Write its mechanism of action. **03**
- (ii). Write the structural activity relationship of Thiazide class of Diuretics. **04**
- (b) (i).Write the mode of action of Proton pump inhibitor class of antiulcer drugs. Give one example with structure. Write its metabolism. **04**
- (ii). Write a brief note with examples on (1). Antacid, (2). Antihelicobacter pylori drugs **03**
- OR**
- Q.3** (a) (i).Explain the following with suitable examples (1). Thrombolytics , (2). Antiplatelet drugs. **04**
- (ii). Explain the terms: Emesis & Antiemetic drugs. Name one D₂ Antagonist antiemetic drug. Write its MOA & metabolism. **03**
- (b) (i).Explain Hyperlipidaemia & antihyperlipidaemic drugs. Write one example of Pyridine derivative class of antihyperlipidaemic agent. Write its MOA & metabolism. **05**
- (ii). What do you mean by Osteoporosis. Name any two drugs for treating Osteoporosis. **02**
- Q.4** (a) (i).What is an NSAID? Give one example of an NSAID. Write the mode of action of NSAID. **03**
- (ii). Write the synthesis of any one of the following anticoagulant drugs: (1). Bis hydroxy coumarin (2). Warfarin. **04**
- (b) Write the SAR in β -phenyl ethylamines in detail. **07**
- OR**
- Q.4** (a) Give an account of general structure of nerve cells with a neat diagram. **07**
- (b) (i). Outline the metabolism of Catecholamine **04**
- (ii). Outline the biosynthesis of Acetylcholine. **03**

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| Q.5 | (a) | Explain in detail the SAR of Anilides as local anesthetics | 07 |
| | (b) | Write the synthesis of (1). Lidocaine Hydrochloride, (2). Benzocaine | 07 |
| OR | | | |
| Q.5 | (a) | Explain in detail the SAR of Dibenzazepines | 07 |
| | (b) | Write the synthesis of (1). Pargyline, (2). Hydralazine Hydrochloride | 07 |
