

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER –8 EXAMINATION – WINTER-2025**

**Subject Code: 2280003****Date: 17-11-2025****Subject Name: Pharmaceutical Chemistry – X (Medicinal Chemistry - III)****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) Discuss the SAR of HMG CoA Reductase inhibitors and write down synthesis of warfarin **06**
- (b) Write down short note on Cardio tonic agents. **05**
- (c) Discuss Calcium Channel Blockers. **05**
- Q.2** (a) What is Renin-angiotensin system? Discuss ACE inhibitors. **06**
- (b) Write down short note on Immunomodulators. **05**
- (c) Give synthesis of Atenolol and Nifedipine. **05**
- Q.3** (a) Discuss drugs used to treat Hypothyroidism and Hyperthyroidism. **06**
- (b) Write a note on plasma expanders. **05**
- (c) What are diuretics? Give detailed SAR of thiazide diuretics. **05**
- Q.4** (a) Write down Classification and SAR of Adrenocorticoids. **06**
- (b) Write a note on anti-obesity drugs. **05**
- (c) Give synthesis of Acetazolamide and Furosemide. **05**
- Q.5** (a) Classify anti-diabetic agents and write down synthesis of Metformin. **06**
- (b) Give details on Coagulants and Anti-coagulant agents **05**
- (c) Classify Antiarrhythmic Agents **05**
- Q. 6** (a) Discuss Sex hormones and write down SAR of Estrogen. **06**
- (b) Discuss Anti platelet Agents **05**
- (c) Discuss Nitrates and Nitrites as an anti-Anginal agents **05**
- Q.7** (a) Explain in detail the nomenclature and stereochemistry of Steroidal Compounds. **06**
- (b) Write a note on  $\beta$ -blockers. **05**
- (c) Give the method of synthesis of Clofibrate and Lignocaine **05**