

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VIII • EXAMINATION – SUMMER • 2014

Subject Code: 280003

Date: 23-05-2014

Subject Name: Pharmaceutical Chemistry X (Medicinal Chemistry)

Time: 10:30 am - 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.**

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|-------------|---|-----------|
| Q.1 | (a) What are cardiotonic agents? Give the SAR of cardiac glycosides. | 06 |
| | (b) Classify Antiarrhythmic agents with one structure in each class. Write synthesis of Lignocaine. | 05 |
| | (c) Write short notes on sodium channel blockers as antiarrhythmic agents. | 05 |
| Q.2 | (a) Give SAR of HMG-CoA reductase inhibitors. | 06 |
| | (b) Write short notes on antianginal agents. | 05 |
| | (c) Give the synthesis of following drugs (Any two): | 05 |
| | i. Captopril | |
| | ii. Atenolol | |
| | iii. Clofibrate | |
| Q.3 | (a) Write Mechanism of action, uses, side effect and SAR of ACE inhibitors. | 06 |
| | (b) Classify antihypertensive agents with one structure in each class. | 05 |
| | (c) Give the synthesis of following drugs (Any two): | 05 |
| | i. Nifedipine | |
| | ii. Dobutamine | |
| | iii. Hydrochlorthiazide | |
| Q.4 | (a) Classify diuretics with one structure in each class. Write mechanism of action, uses and side effect of spironolactone. | 06 |
| | (b) Give SAR of thiazide diuretics. | 05 |
| | (c) Write short notes on heparin as anticoagulant. | 05 |
| Q.5 | (a) Give SAR of 1,4-Dihydropyridines antihypertensive agents. | 06 |
| | (b) Write short notes on antiplatelet agents. | 05 |
| | (c) Give brief notes on thrombolytic agents. | 05 |
| Q. 6 | (a) Write short notes on Hansch Linear Free Energy Relationship (LFER) model in QSAR study. | 06 |
| | (b) Give detail notes on combinatorial synthesis. | 05 |
| | (c) Write short notes on plasma expander and antiobesity drugs | 05 |
| Q. 7 | (a) What is Molecular Modeling (MM)? Explain the same in detail. | 06 |
| | (b) Write detail notes on lead optimization. | 05 |
| | (c) Write brief notes on Lipophilic parameters in drug design. | 05 |
