Seat No.: _____ Enrolment No._____

**GUJARAT TECHNOLOGICAL UNIVERSITY**
**B.PHARM. - SEMESTER– VIII • EXAMINATION – SUMMER-2016**

**Subject Code: 280003** **Date: 02/05/2016**
**Subject Name**: **Pharmaceutical Chemistry-X (Medicinal Chemistry)**
**Time: 10:30 AM to 1:30 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)** | Write a note on Plasma expanders and Antiobesity drugs. | **06** |
| | **(b)** | Define and classify Antianginal agents with the synthesis of Isosobide dinitrate. | **05** |
| | **(c)** | Discuss various methods for optimization of lead compound. | **05** |
| **Q.2** | **(a)** | Define Molecular Modeling and write a note on application of Computer Aided Drug Design technique. | **06** |
| | **(b)** | Give the History and classification of Cardiotonic agents with synthesis of Dobutamine. | **05** |
| | **(c)** | Outline SAR of 3-Hydroxy 3-Methyl Glutaryl CoA reductase inhibitors | **05** |
| **Q.3** | **(a)** | Define QSAR and write a note on Hansch Linear Free Energy Relationship model. | **06** |
| | **(b)** | Give the synthesis of Lignocaine and Flecainide. | **05** |
| | **(c)** | Discuss the various factors which are affecting on bood coagulation and write a note on Warfarin. | **05** |
| **Q.4** | **(a)** | Define antihypertensive agents with its classification and write a note on calcium channel blockers. | **06** |
| | **(b)** | Discuss the role of combinatorial chemistry in new drug discovery. | **05** |
| | **(c)** | Outline SAR activity of 5-Sulfamoyl benzoic acid derivatives. | **05** |
| **Q.5** | **(a)** | What do you mean by Diuretics? Classify and give the synthesis of (i) Acetazolamide (ii) Dihydro flumethiazide | **06** |
| | **(b)** | Write a note on Thrombolytic agents. | **05** |
| | **(c)** | Give the mechanism of action and synthesis of Captopril. | **05** |
| **Q. 6** | **(a)** | What is Free Wilson Mathematical Model? Explain it. | **06** |
| | **(b)** | Give the SAR of Thiazide Duretics. | **05** |
| | **(c)** | Discuss the role of Antiplatelet agents. | **05** |
| **Q.7** | **(a)** | Outline SAR activity of Dihydropyridines and give the synthesis of Nifedipine. | **06** |
| | **(b)** | Synthesis of (i) Ethacrinic acid (ii) Furosemide. | **05** |
| | **(c)** | Write a note on drugs that block sodium channels of myocardium to act as Antiarrhythmic agents. | **05** |

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