

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Pharm – SEMESTER 8 • EXAMINATION – WINTER -2019**

**Subject Code:280003**

**Date: 19/11/2019**

**Subject Name: PHARMACEUTICAL CHEMISTRY-X (MEDICINAL CHEMISTRY)**

**Time: 3 Hours (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.

- |             |                                                                                                                                                     |           |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Q.1</b>  | <b>(a)</b> Write a note on Hansch Linear Free Energy Relationship (LFER) Model in QSAR Studies                                                      | <b>06</b> |
|             | <b>(b)</b> Discuss direct and indirect Molecular modeling                                                                                           | <b>05</b> |
|             | <b>(c)</b> Write a note on high throughput screening (HTS)                                                                                          | <b>05</b> |
| <b>Q.2</b>  | <b>(a)</b> Give SAR activity of Dihydropyridines and Give the synthesis of Nifedipine                                                               | <b>06</b> |
|             | <b>(b)</b> Give synthesis of any two: a) Metformin b) Glipizide c) Carbimazole                                                                      | <b>05</b> |
|             | <b>(c)</b> Outline SAR activity of 5- Sulfamoyl benzoic acid derivatives                                                                            | <b>05</b> |
| <b>Q.3</b>  | <b>(a)</b> Define and classify diuretics with suitable examples. Discuss Potassium Sparing Diuretics                                                | <b>06</b> |
|             | <b>(b)</b> Write a note anti anginal drugs                                                                                                          | <b>05</b> |
|             | <b>(c)</b> Give structure and synthesis of: 1) Clofibrate b) Warfarin                                                                               | <b>05</b> |
| <b>Q.4</b>  | <b>(a)</b> Write a brief note on Physico Chemical Properties affecting drug action                                                                  | <b>06</b> |
|             | <b>(b)</b> Write mechanism of action, uses, side effect and SAR of ACE Inhibitors                                                                   | <b>05</b> |
|             | <b>(c)</b> Write a short note on sodium channel blockers as anti hypertensive                                                                       | <b>05</b> |
| <b>Q.5</b>  | <b>(a)</b> Define Atherosclerosis and classify Antihyperlipidemic agents. Give normal value of LDL, HDL, Triglycerides and Total cholesterol levels | <b>06</b> |
|             | <b>(b)</b> Sketch out the process of blood clotting schematically and discuss on the intervention part of anticoagulants                            | <b>05</b> |
|             | <b>(c)</b> Give structure of: a) spironolactone b) Procainamide c) Hydralazine d) Acetazolamide                                                     | <b>05</b> |
| <b>Q. 6</b> | <b>(a)</b> Define anti arrhythmic drugs. Give a comprehensive account of antiarrhythmic agents used as CVS Drugs with one example in each category  | <b>06</b> |
|             | <b>(b)</b> What are calcium channel blockers, classify them and give synthesis of of atenolol                                                       | <b>05</b> |
|             | <b>(c)</b> Discuss chemistry and SAR of cardiac glycoside                                                                                           | <b>05</b> |
| <b>Q.7</b>  | <b>(a)</b> Give brief account of beta blockers as potential antihypertensive agents.                                                                | <b>06</b> |
|             | <b>(b)</b> Classify diuretics give mechanism and structure of one drug from each class.                                                             | <b>05</b> |
|             | <b>(c)</b> Write a note on anti obesity drugs                                                                                                       | <b>05</b> |

\*\*\*\*\*