

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. - SEMESTER-V • EXAMINATION – WINTER -2019**

**Subject Code: 250004****Date: 22/11/2019****Subject Name: PHARMACEUTICAL CHEMISTRY-VI (MEDICINAL)****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.

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|-------------|------------|--|-----------|
| <b>Q.1</b>  | <b>(a)</b> | Enumerate and define physicochemical properties of drug molecules. Explain Ionization and Hydrogen bonding in detail.              | <b>06</b> |
|             | <b>(b)</b> | What is Bioisosterism? Classify and Explain in brief with examples.  | <b>05</b> |
|             | <b>(c)</b> | What are geometric isomers? Explain with examples of drugs which are influencing the biological activity.                          | <b>05</b> |
| <b>Q.2</b>  | <b>(a)</b> | Give structure of following drugs:<br>1) Omeprazole 2) Salbutamol 3) Promethazine 4) Diphenhydramine 5) Ranitidine                 | <b>06</b> |
|             | <b>(b)</b> | Define expectorants, mucolytics and decongestants. Explain expectorants in detail  | <b>05</b> |
|             | <b>(c)</b> | Write a detail note on Antitussive agents  | <b>05</b> |
| <b>Q.3</b>  | <b>(a)</b> | Write any two reactions of pyridine and thiophene  | <b>06</b> |
|             | <b>(b)</b> | Explain the following with reaction mechanism<br>(1) Skraup's synthesis (2) Fischer synthesis                                      | <b>05</b> |
|             | <b>(c)</b> | Give synthesis of Diphenhydramine and Cetirizine   | <b>05</b> |
| <b>Q.4</b>  | <b>(a)</b> | Describe biosynthesis of prostaglandins in detail. Biological actions and clinical applications of Prostaglandins and thromboxane. | <b>06</b> |
|             | <b>(b)</b> | What are Eicosanoids? Discuss COX pathway.   | <b>05</b> |
|             | <b>(c)</b> | Write a note on Enzyme preparations for GIT disorders.   | <b>05</b> |
| <b>Q.5</b>  | <b>(a)</b> | Define and classify anti-asthmatic agents with examples.   | <b>06</b> |
|             | <b>(b)</b> | Discuss the SAR of H <sub>1</sub> -Antagonists.  | <b>05</b> |
|             | <b>(c)</b> | Discuss radio contrast media.  | <b>05</b> |
| <b>Q. 6</b> | <b>(a)</b> | Write in detail about antidiarrhoeal agent?  | <b>06</b> |
|             | <b>(b)</b> | Write a note on antiemetics.   | <b>05</b> |
|             | <b>(c)</b> | Write in short about Laxatives.  | <b>05</b> |
| <b>Q.7</b>  | <b>(a)</b> | Define Medicinal chemistry and Discuss development of Medicinal chemistry.   | <b>06</b> |
|             | <b>(b)</b> | Explain in detail about partition coefficient and its importance for crossing the biological membrane.                             | <b>05</b> |
|             | <b>(c)</b> | Write in short about IBD.  | <b>05</b> |

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