

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

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

## GUJARAT TECHNOLOGICAL UNIVERSITY

**B.PHARM – SEMESTER – VII • EXAMINATION – WINTER – 2015**

**Subject Code: 2270003**

**Date: 09/12/2015**

**Subject Name: Pharmaceutical Chemistry – IX (Medicinal Chemistry-III)**

**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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|-------------|-----|---|-----------|
| <b>Q.1</b>  | (a) | Which drug designing tool is used to optimize the potency in a series of compounds? Write in detail about the most popular model used for it. | <b>06</b> |
|             | (b) | Define and classify antifungal agents. Write in detail about azoles as antifungals.   | <b>05</b> |
|             | (c) | Give SAR of tetracyclines   | <b>05</b> |
| <b>Q.2</b>  | (a) | What is combinatorial chemistry? Discuss in detail about different methodologies used for synthesis in it.                                    | <b>06</b> |
|             | (b) | Discuss SAR of fluoroquinolones as antibacterials.  | <b>05</b> |
|             | (c) | Give synthesis of Trimethoprim and Norfloxacin.   | <b>05</b> |
| <b>Q.3</b>  | (a) | Discuss in detail about degradation products of penicillin  | <b>06</b> |
|             | (b) | Discuss the chemistry of aminoglycoside antibiotics   | <b>05</b> |
|             | (c) | Write a note on short acting sulfonamides   | <b>05</b> |
| <b>Q.4</b>  | (a) | Write in detail about the path of new drug discovery based on rational approach.  | <b>06</b> |
|             | (b) | Write synthesis of Pyrimethamine and Albendazole.   | <b>05</b> |
|             | (c) | Write a note on molecular modeling.   | <b>05</b> |
| <b>Q.5</b>  | (a) | What is MDR-TB and XDR-TB? How it develops? What are the measures used to control it?   | <b>06</b> |
|             | (b) | Discuss about Hansen's Disease and MAC.   | <b>05</b> |
|             | (c) | Write synthesis of Ketoconazole and Ethambutol  | <b>05</b> |
| <b>Q. 6</b> | (a) | Classify antiameobic agents and discuss any one class in detail.  | <b>06</b> |
|             | (b) | Write synthesis of Sulphamethoxazole and Chloramphenicol.   | <b>05</b> |
|             | (c) | Write a note on third and fourth generation cephalosporins.   | <b>05</b> |
| <b>Q.7</b>  | (a) | Classify anticancer agents and write about any one class in detail.   | <b>06</b> |
|             | (b) | Give synthetic route for Temoxifen and Thiotepa.  | <b>05</b> |
|             | (c) | Classify anti-HIV agents and write a note on reverse transcriptase inhibitors.  | <b>05</b> |

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