

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER – 7- EXAMINATION – WINTER - 2018**

**Subject Code: 2270003**

**Date: 19/11/2018**

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

**Time: 10:30 AM TO 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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|------------|-----|---|-----------|
| <b>Q.1</b> | (a) | Classify sulfonamide on the basis of chemical structure and explain biosynthetic pathway leading to THF synthesis with involvement of sulfonamides. | <b>06</b> |
|            | (b) | Explain SAR of fluoroquinolones.  | <b>05</b> |
|            | (c) | Write chemical name and synthesis of sulfacetamide and norfloxacin.   | <b>05</b> |
| <b>Q.2</b> | (a) | Classify cephalosporin and represent various ring and numbering system of clinically available beta-lactam antibiotic types with examples.          | <b>06</b> |
|            | (b) | Explain chemical instability of penicillin in detail.   | <b>05</b> |
|            | (c) | Explain SAR activities of aminoglycoside antibiotics.   | <b>05</b> |
| <b>Q.3</b> | (a) | Give any three structures of macrolide antibiotics and explain why erythromycin is unstable in acid media.  | <b>06</b> |
|            | (b) | Explain epimerization and degradation of tetracycline in detail.  | <b>05</b> |
|            | (c) | Write a short note on carbapenem and monobactams.   | <b>05</b> |
| <b>Q.4</b> | (a) | Classify antimalarial agents with examples and structures.  | <b>06</b> |
|            | (b) | Write chemical name and synthesis of primaquine and metronidazole.  | <b>05</b> |
|            | (c) | Explain SAR activities of quinolines.   | <b>05</b> |
| <b>Q.5</b> | (a) | Explain XDR-TB. write a note on first-line anti TB agents.  | <b>06</b> |
|            | (b) | Classify and explain mechanism of action ofazole antifungal agents.   | <b>05</b> |
|            | (c) | Write chemical name and synthesis of ketoconazole and isoniazid.  | <b>05</b> |
| <b>Q.6</b> | (a) | What is carcinoma? Classify anticancer agent with examples and structures.  | <b>06</b> |
|            | (b) | Write a note on alkylating agents used as anticancer agent.   | <b>05</b> |
|            | (c) | Write a note on antiviral agents.   | <b>05</b> |
| <b>Q.7</b> | (a) | Explain in detail molecular modeling.   | <b>06</b> |
|            | (b) | Write a note on methods of lead discovery.  | <b>05</b> |
|            | (c) | Write a note on QSAR.   | <b>05</b> |

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