

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. – SEMESTER – VIII • EXAMINATION – WINTER • 2016**

**Subject Code: 2280008**

**Date: 02-12-2016**

**Subject Name: Bioavailability and Therapeutic Drug Monitoring**

**Time: 02:30 pm - 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>  | (a) | Write different methods and parameters of assessing bioavailability.                                    | <b>06</b> |
|             | (b) | Enumerate various techniques used for enhancing Bioavailability. Explain any one in detail.             | <b>05</b> |
|             | (c) | Write note on Pharmacokinetic and Pharmacodynamic models.   | <b>05</b> |
| <b>Q.2</b>  | (a) | Explain detail HPTLC technique used in TDM.   | <b>06</b> |
|             | (b) | Define Bioavailability and give its objectives.   | <b>05</b> |
|             | (c) | Write short note on Theories of Dissolution.  | <b>05</b> |
| <b>Q.3</b>  | (a) | Describe the term Immunoassays. Explain RIA in details.   | <b>06</b> |
|             | (b) | Write detail note on HPLC technique.  | <b>05</b> |
|             | (c) | Explain recommendations and uses of TDM.  | <b>05</b> |
| <b>Q.4</b>  | (a) | Explain factor affecting Bioavailability related to physicochemical and formulation.                    | <b>06</b> |
|             | (b) | Write criteria for selection of method for TDM.   | <b>05</b> |
|             | (c) | Write short note on Immunosuppressants.   | <b>05</b> |
| <b>Q.5</b>  | (a) | Explain study designs and analysis of BA-BE studies.  | <b>06</b> |
|             | (b) | Write adverse drug reaction and drug interaction of Phenytoin.  | <b>05</b> |
|             | (c) | Write note on invivo-invito correlation studies.  | <b>05</b> |
| <b>Q. 6</b> | (a) | Explain clinical monitoring parameters, usual dosing parameters and common toxicities of carbamazepine. | <b>06</b> |
|             | (b) | Write various problems of interference of biological matrix.  | <b>05</b> |
|             | (c) | Write note on TDM of Digoxin.   | <b>05</b> |
| <b>Q.7</b>  | (a) | Write techniques used for estimation of lidocaine and phenobarbitone.                                   | <b>06</b> |
|             | (b) | Explain theories of Dissolution.  | <b>05</b> |
|             | (c) | Write short note on ELISA.  | <b>05</b> |

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