

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

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

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

**Subject Code: 2280008****Date: 27-11-2019****Subject Name: Bioavailability and Therapeutic Drug Monitoring****Time: 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.

- Q.1** (a) What is Invitro-Invivo correlation studies? Explain it in detail. **06**  
(b) Explain factors affecting bioavailability. **05**  
(c) Discuss the role of clinical pharmacist in TDM. **05**
- Q.2** (a) Enumerate Immunoassay methods used in TDM. Explain RIA in detail. **06**  
(b) Explain collection & storage of body fluid samples. **05**  
(c) Write down criteria for selection of methods of TDM. **05**
- Q.3** (a) Define Bioavailability and Bioequivalence. Discuss objectives of BA studies. **06**  
(b) Explain methods and parameters of assessing bioavailability. **05**  
(c) Explain HPTLC techniques used in TDM. **05**
- Q.4** (a) Explain study designs and analysis of BA-BE studies. **06**  
(b) Write down TDM for Gentamycin. **05**  
(c) Write adverse drug reaction & drug interaction of Theophylline. **05**
- Q.5** (a) Write down TDM for Phenobarbitone. **06**  
(b) Write various problems of interference of biological matrix. **05**  
(c) Write a note on determination of AUC. **05**
- Q.6** (a) Write techniques used for estimation of lidocaine & phenobarbitone. **06**  
(b) Explain theories of dissolution. **05**  
(c) Write a note on ELISA. **05**
- Q.7** (a) Write down TDM for Digoxin. **06**  
(b) Explain algorithm for interpretation of TDM result for drug used as prophylactic therapy. **05**  
(c) Write a note on first pass clearance. **05**

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