Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER– VIII • EXAMINATION – SUMMER-2016

Subject Code:2280008 **Date: 10/05/2016**
Subject Name: Bioavailability and Therapeutic Drug Monitoring
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.**

Q.1	**(a)**	Explain following terms: 1. Relative Bioavailability 2. Absolute Bioavailability 3. First pass clearance	**06**
	(b)	Define TDM. Explain objective of TDM.	**05**
	(c)	What is the role of clinical pharmacist in TDM?	**05**
Q.2	**(a)**	Explain Invivo – Invitro correlation studies.	**06**
	(b)	Explain techniques of bioavailability enhancement through drug solubility.	**05**
	(c)	Explain methods and parameters of assessing bioavailability.	**05**
Q.3	**(a)**	Enumerate bioequivalence study design. Explain any one in detail.	**06**
	(b)	Enumerate elements of bioequivalence study protocol. Explain subject selection in detail.	**05**
	(c)	Explain factors affecting bioavailability.	**05**
Q.4	**(a)**	Explain collection and storage of body fluids samples.	**06**
	(b)	Explain problems of interference in biological matrix.	**05**
	(c)	Explain factor affecting in serum drug concentration.	**05**
Q.5	**(a)**	Enumerate physical methods used in TDM. Explain any one in detail.	**06**
	(b)	Enumerate Immunoassay methods used in TDM. Explain ELISA in details.	**05**
	(c)	Explain Physiochemical parameter of drug for TDM.	**05**
Q. 6	**(a)**	Write clinical monitoring and dosing parameter techniques for Digoxin.	**06**
	(b)	Explain algorithm for the interpretation of TDM result for drug used as prophylactic therapy.	**05**
	(c)	Write adverse drug reaction and drug interaction of Phenobarbitone.	**05**
Q.7	**(a)**	Explain in detail the conditions when TDM should perform.	**06**
	(b)	Explain NIIA detection technique with respect to application for TDM.	**05**
	(c)	Write techniques used for estimation of addictive drugs.	**05**

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