

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER-VIII • EXAMINATION – SUMMER-2018

Subject Code: 2280008**Date: 09/05/2018****Subject Name: Bioavailability and Therapeutic Drug Monitoring****Time: 10:30AM to 01:30PM****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:
(I) Bioequivalence.
(II) First pass clearance.
(III) Relative bioavailability.
(b) Explain physicochemical factors affecting bioavailability.
(c) Enlist theories of dissolution and explain any one in detail. | 06

05
05 |
| Q.2 | (a) What is TDM? Give its uses and recommendations.
(b) Explain in brief collection and storage condition of body fluid samples.
(c) Explain in detail radio immunoassay method. | 06
05
05 |
| Q.3 | (a) Explain following techniques for in TDM of valproic acid:
(I) Sample collection.
(II) Time of sample collection.
(b) Explain following techniques for in TDM of phenytoin:
(I) Usual dosing parameters.
(II) Clinical monitoring parameters.
(c) Explain following techniques for in TDM of Immunosuppressants:
(I) Common toxicities.
(II) Drug reaction and interactions. | 06

05

05 |
| Q.4 | (a) Explain in brief techniques for enhancing bioavailability.
(b) Write a short note on in vivo-in vitro correlation studies.
(c) Enlist pharmacodynamic models. Explain any one in detail. | 06
05
05 |
| Q.5 | (a) What are the criteria for selection of method for TDM? Explain in brief sample related parameters.
(b) Enumerate elements of bioequivalence study protocol. Explain any one in detail.
(c) Enlist physical methods used in TDM. Explain any one in detail. | 06
05
05 |
| Q. 6 | (a) Write a short note on role of clinical pharmacist in TDM.
(b) Explain in detail ELISA Immuno assay.
(c) What is the objective of BA studies? | 06
05
05 |
| Q.7 | (a) Enumerate immunoassay methods used in TDM. Explain FPIA in details.
(b) Give a full form of following terms:
(I) HPLC (II) HPTLC (III) GC (IV) EMITH (V)TDM
(c) Write a short note on study of clinical pharmacokinetics and importance parameters for lidocaine. | 06
05

05 |