

**FACULTY OF PHARMACY**

**M. Pharmacy (Pharmaceutical Analysis) II-Semester (PCI) (Suppl.) Examination,  
February 2019**

**Subject: Modern Bio Analytical Techniques**

**Time: 3 Hrs**

**Max. Marks: 75**

**Note: Answer any five questions. All questions carry equal marks.**

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|---|---|----|
| 1 | Write abt the following sample preparation techniques.  | 6  |
|   | (a) Solid phase extraction  |    |
|   | (b) Liquid Liquid extraction  |    |
|   | (c) Explain the Bioanalytical method validation as per USFDA guidelines.  | 9  |
| 2 | (a) Discuss abt Biopharmaceutical factors affecting drug bioavailability.   | 10 |
|   | (b) Write the Biopharmaceutics classification system defined by FDA.  | 5  |
| 3 | (a) What is enzyme inhibition? Discuss abt drug interactions due to enzyme inhibition with examples.              | 7  |
|   | (b) Discuss abt drug -protein binding interactions with examples.   | 8  |
| 4 | (a) Write abt principles, instrumentation and applications of flow cytometry.                                     | 9  |
|   | (b) Write abt cryopreservation and storage of cells.  | 6  |
| 5 | (a) Explain different study designs in bioequivalence studies.  | 10 |
|   | (b) Differentiate absolute and relative bioavailability with illustrative examples and equations.                 | 5  |
| 6 | (a) Discuss the importance and applications of Toxicokinetic studies.   | 8  |
|   | (b) Write abt basic equipments used in cell culture lab.  | 7  |
| 7 | (a) Discuss abt different approaches for identification of metabolites.   | 10 |
|   | (b) Write short note on clinical significance of bioequivalence studies.  | 5  |
| 8 | (a) Describe the compendia methods of dissolution testing.  | 7  |
|   | (b) Write abt <i>in-vivo</i> and <i>in-vitro</i> methods for checking cellular permeability of new drug products. | 8  |

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