

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

**M.PHARM. DEGREE EXAMINATION – July 2019
Second Semester**

BRANCH: PHARMACEUTICAL ANALYSIS

MODERN BIO-ANALYTICAL TECHNIQUES

Time : Three hours

Maximum: 75 marks

**(Draw neat labeled diagrams wherever necessary
your answer should be specific to the questions asked)**

SECTION –A

I. Answer any **THREE** questions: **(3 x 15 = 45)**

1. Discuss the stability of bioanalytical methods for the separation of drugs and metabolites from biological fluids as per USFDA guidelines.
2. What are the principles of toxicokinetics? Describe various toxicokinetic evaluation methods in preclinical studies.
3. Describe the principle, instrumentation and applications of fluorescence activated cell sorter.
4. Describe in detail the in-vitro/in-vivo approaches of metabolite identification.

SECTION –B

II. Answer any **THREE** questions: **(3 x 10 = 30)**

5. Discuss the recent advances in supercritical fluid extraction and column switching techniques for the extraction of samples from biological matrices.
6. What is dissolution? Discuss the factors affecting drug dissolution and dissolution rate.
7. Discuss the application of LC-MS in proteomics.
8. Write notes on : a) Cryopreservation of cells b) Principle and procedure of MTT assay.