

FACULTY OF PHARMACY**M. Pharmacy (Pharmaceutics) II-Semester (PCI) (Main) Examination, August 2018****Subject: Advance Biopharmaceutics & Pharmacokinetics****Time: 3 Hrs****Max. Marks : 75****Note: Answer any five questions. All questions carry equal marks.**

- 1 (a) Derive expressions for c_{max} and t_{max} for one compartment open model, extra vascular administration. (8)
(b) Explain with examples cytochrome p450 based drug interactions. (7)
- 2 (a) What are the different methods for assessment of bioavailability? (8)
(b) What are the special concerns in bioavailability and bioequivalence studies. (7)
- 3 (a) Write the significance of different volumes of distribution in two compartment model. (5)
(b) Write a note on volume of distribution and clearance. (10)
- 4 (a) Explain various methods to study drug permeability. (7)
(b) Write about IVIVC. (8)
- 5 (a) Derive Michaelis-Menten equation. How do you estimate K_m and V_m . (10)
(b) How do you compare dissolution profiles? (5)
- 6 (a) Explain the applications of pharmacokinetic principles in controlled release dosage forms. (8)
(b) Write a note on microclimate intracellular pH and tight junction complex. (7)
- 7 (a) Enumerate physicochemical factors of the drug affecting dissolution. (7)
(b) Explain the kinetics of IV infusion for one compartment model. (8)
- 8 (a) Explain various cross over designs in bioequivalence studies. (7)
(b) Write in detail about compartment models. (8)
