

Subject Code: CEU 11

M.Pharmacy I Semester Regular/Supplementary Examinations March 2014

BIO-PHARMACEUTICS & PHARMACOKINETICS
(Pharmaceutics)

Time: 3 hours

Max Marks: 60

Answer any FIVE questions. All questions carry equal marks.

1. a) Explain the following terms
i) Therapeutic equivalent ii) Relative bioavailability
b) Describe various methods for assessing bioavailability
2. Discuss in detail on various physicochemical parameters affecting drug absorption. Write a note on carrier mediated transport mechanism.
3. Write about the following
a) *In vitro in vivo* correlation
b) Methods for enhancing dissolution rate
c) The Franz diffusion cell
4. Mention the objective of bioavailability studies and describe the pharmacokinetic method of estimating bioavailability using plasma samples. Write a note on *in vitro-in vivo* correlations.
5. a) Compare the pharmacokinetics of iv bolus injection and iv infusion.
b) Hepatic clearance
c) How will you calculate steady state concentration in case of one compartment model constant iv infusion.
6. Write in detail on volume of distribution and derive the equation indicating the relation between protein-drug binding and volume of distribution. Explain the various factors influencing the linearity in pharmacokinetics..
7. a) Describe in detail about capacity limited pharmacokinetics.
b) Chronopharmacokinetics
c) AUC
d) Lung clearance
8. a) Give a detailed account on the effect of drug-drug interactions on metabolism
b) Differentiate between passive diffusion and active transport.
