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Total No. of Pages : 01

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M.Pharmacy(Industrial Pharmacy) (2017 Batch) (Sem.–2)

ADVANCED BIOPHARMACEUTICS AND PHARMACOKINETICS

Subject Code : MIP-201T

Paper ID : [74931]

Time : 3 Hrs. Max. Marks : 75

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of SIX questions.
2. Each question carries FIFTEEN marks.

1. a) Discuss the physiological factors that influence the absorption of drugs administered through oral route. (7.5)

   b) Discuss the principle of dissolution from solid dosage forms. (7.5)

2. a) Give an account of the *in vitro - in vivo* correlation methods according to USP. (7.5)

   b) Explain the influence of pKa of drug and pH of biological fluid in influencing drug absorption. (7.5)

3. a) What are tight junctions? Explain their role in drug absorption. (7.5)

   b) Explain the biopharmaceutical factors influencing drug absorption. (7.5)

4. a) Define Vd and AUC. Explain the correlation between them. (7.5)

   b) What are Km and Vm? How are they estimated? (7.5)

5. a) Give an account of study designs used for bioequivalence testing of drug products. (7.5)

   b) Enumerate the drugs/dosage forms that enjoy waiver from bioequivalence testing. (7.5)

6. a) Consider the following data : (7.5)

Drug product	Dose (mg)	AUC micro gm hr / ml
Oral tablet	200	89.5
Oral solution	200	86.1
IV Bolus injection	50	37.8

   Calculate the Relative and Absolute bioavailability.

   b) Write briefly about PK - PD relationships. (7.5)