

PARUL UNIVERSITY
FACULTY OF PHARMACY
Pharm.D /Pharm.D (PB) Examination April- 2019

Year: 4 /1

Subject Code: 08207405

Subject Name: Biopharmaceutics & Pharmacokinetics

Date: 24/04/2019

Time: 02:00pm to 05:00pm

Total Marks: 70

Instructions

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

Q.1 Essay Type Questions. (any 2 out of 3) (15 Mark Each) (30)

1. Explain in detail different methods for estimation of absorption rate constant.
2. Enlist factors affecting drug absorption. Explain any three factors in detail.
3. Enlist factors affecting renal excretion. Explain any three in detail.

Q.2 Short Essay Type Questions. (any 4 out of 5) (5 Mark Each) (20)

1. The tissue/blood partition coefficient values of drug and tissue perfusion rates are given in the table below:

Tissues	Kt/b	Perfusion Rate	Kt	Distribution t _{1/2}
Liver	1	0.8		
Brain	3	0.6		
Muscle	9	0.045		
Fat	45	0.08		

2. Draw plasma drug concentration time profile. Discuss various pharmacokinetic parameters which can be determined from such a profile.
3. Write a short note on Noncompartmental Analysis.
4. Enlist various phase I reactions involved in biotransformation and explain reduction in detail.
5. Write a note on physiological parameter model.

Q.3 Short Answers. (2 Mark Each) (20)

1. What is drug accumulation?
2. What is Loading dose?
3. Comment and Justify: Creatinine is used to estimate GFR.
4. What is Perfusion rate?
5. Define Electrophiles and Free Radicals.
6. What is BDDCS?
7. Define Bioavailable dose and Pharmaceutical equivalence.
8. What is IVIVC?
9. What is MRT?
10. What is Pore transport?