QP Code: 624006 **Reg. No…….**

Sixth Semester B. Pharm Degree Regular/Supplementary Examinations July 2023
Biopharmaceutics and Pharmacokinetics

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Define drug absorption. Explain various mechanism of drug absorption.
2. Define renal excretion of drugs. Explain the factors affecting renal excretion of drugs.

Short Notes **(7x5=35)**

3. Explain on patient related factors affecting drug absorption.
4. Explain the effect of urine pH and urine flow rate on renal excretion of drugs and how can they be used to treat drug intoxication.
5. Describe the physiological barriers of drug distribution.
6. Explain the significance of a loading dose in a multiple dosage regimen. Derive expressions for loading dose and maintenance dose.
7. What do you understand by 'Two compartment open model'. Draw and explain the plasma drug level curve obtained after the administration of an I.V bolus of a drug following two compartment model.
8. Explain the methods for the enhancement of bioavailability.
9. Write briefly on physiologic models. What are the advantages over compartment models.

Answer Briefly **(10x2=20)**

10. Explain extraction ratio.
11. Define bioavailability and bioequivalence.
12. Write any one method for determination of AUC.
13. Explain apparent volume of drug distribution.
14. Explain the various levels of IVIVC.
15. Cytochrome p-450 oxidation-reduction cycle in phase – 1 biotransformation reaction.
16. Factors causing non-linearity in pharmacokinetics.
17. Explain plasma protein binding.
18. Mention the advantages of urinary excretion data in the analysis of pharmacokinetic system.
19. Explain the key features of any one official apparatus for dissolution studies.

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