2012 Scheme

QP CODE: 314006 **Reg. No: ……..**

Third Year B.Pharm Degree Supplementary Examinations August 2021
Pharmaceutics - IV

(Biopharmaceutics and Pharmacokinetics)

Time: 3 Hours **Total Marks: 100**

- ***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***
- ***Write chemical structures/equations wherever necessary.***

Essays **(3x10=30)**

1. Explain various formulation factors influencing drugs absorption through gastrointestinal tract with examples.
2. Explain the pharmacokinetics of drug administered by Extravascular route assuming one compartment open model.
3. What are the causes for non-linearity in pharmacokinetics. Describe Michaelis-Menten equation. Explain the situations when Km=C, Km>>C and Km<<C

Short notes **(14x5=70)**

4. How is first order absorption rate constant Ka determined by method of residuals.
5. What are the Direct and Indirect methods to determine bioavailability.
6. What is In Vitro- In Vivo Correlation (IVIVCs). Explain various levels of correlations
7. Describe Phase I biotransformation with examples
8. Explain the Kinetics of protein binding of drugs
9. What are the factors influencing drug clearance. Explain them with examples
10. Why and How is dosage regimen modified/adjusted in renal impaired cases.
11. Describe rate of excretion and sigma Minus method to determine Ke and KE from Urinary excretion data
12. Describe the pharmacokinetics of drug undergoing zero order absorption – one compartment open model.
13. Explain Enterohepatic cycling with examples
14. How can steady state be attained instantaneously by administering drug as IV bolus and IV infusion. Prove mathematically.
15. What is dose dependent kinetics. State the simple test to detect dose dependency kinetics of a drug
16. Define renal clearance ratio. How does it help in understanding the mechanism of clearance.
17. Explain Flip flop phenomenon. What it is due to.

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