



**Biopharmaceutics and Pharmacokinetics**

**(Revised Scheme 4)**

**Q.P. CODE: 9338**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

**LONG ESSAY (Answer any TWO)**

**2 X 20 = 40 Marks**

1. Explain in detail about physicochemical properties of drug absorption.
2. What is pharmacokinetic model? Explain one compartment open model in detail with i.v bolus drug administration. Derive various pharmacokinetic parameters of the same.
3. Explain multiple dosing with respect to i.v and oral route in detail.

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Determination of rate of absorption by Wagner-Nelson Method
5. In vitro, in vivo correlation
6. Explain various causes of non-linearity reaction. With the help of equation, estimate  $K_m$  and  $V_{max}$  using Michaelis-Menten equation.
7. What are the various factors affecting rate of distribution?
8. Physiological pharmacokinetic model
9. Phase I reactions

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. MRT for various compartmental model
11. Therapeutic drug monitoring

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