[Time: 3 Hours] [Max. Marks: 100]

## <u>Biopharmaceutics and Pharmacokinetics</u> (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 various approaches to improve dissolution of poorly water soluble drugs.
- 2. Explain in detail about the absorption drugs from non-per oral routes.
- 3. Differentiate between compartmental model and physiological model. Explain one compartment open model with extravascular drug administration along with various pharmacokinetic parameters.

## **SHORT ESSAY (Answer any FIVE)**

5 X 10 = 50 Marks

- 4. Measurement of bioavailability
- 5. Explain Phase II reactions with examples.
- 6. Explain in detail about the concept of clearance along with equations.
- 7. Explain kinetics protein binding. Write its significance.
- 8. Explain the importance of therapeutic drug monitoring in individualization of a drug therapy.
- 9. Write the causes for non-linearity. Write about the method of detection.

SHORT NOTES 2 X 5 = 10 Marks

- 10. Application of pharmacokinetics in new drug development
- 11. Accumulation index