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

BIOPHARMACEUTICS AND PHARMACOKINETICS

(RS 2 & RS 3) Q.P. CODE: 9283

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 how bioavailability can be determined from oral administration of solid dosage forms.
- 2. Discuss the application of pharmacokinetics in dosage form design.
- 3. Discuss the various in-vitro dissolution testing methods used in pharmaceutical product evaluation.

SHORT ESSAY (Answer any FIVE)

5 X 10 = 50 Marks

- 4. Illustrate the procedure for adjusting the dosage regimen of patients with renal impairment.
- 5. Give the schematic representations of various pharmacokinetic models.
- 6. Explain Michaelis-Menten equation.
- 7. Discuss the various drug excretion pathways.
- 8. Explain the various factors that influence drug metabolism.
- 9. Discuss the kinetics of drug-protein binding.

SHORT NOTES 2 X 5 = 10 Marks

10. Mention the importance of bioequivalence studies.

11. Mention the significance of drug protein binding in drug therapy.

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