

Code: 15R00603

**R15**

B.Pharm III Year II Semester (R15) Regular Examinations May/June 2018

**BIOPHARMACEUTICS & PHARMACOKINETICS**

Time: 3 hours

Max. Marks: 70

**PART – A**

(Compulsory Question)

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- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Mention the different routes of drug administration.
  - (b) Write the importance of particle size in drug absorption.
  - (c) What is meant by first pass effect?
  - (d) Define clearance.
  - (e) Write about pharmaceutical equivalence.
  - (f) How to determine area under curve in a bioavailability study?
  - (g) Define biological half life.
  - (h) What are the applications of non compartment model?
  - (i) What are the reasons behind non linearity?
  - (j) Write the significance of Michaelis-Menten equation.

**PART – B**

(Answer all five units, 5 X 10 = 50 Marks)

**UNIT – I**

- 2 Enumerate the different physico-chemical factors affecting drug absorption.

**OR**

- 3 Outline the different barriers involved during drug distribution.

**UNIT – II**

- 4 Explain any three conjugation reactions involved in phase – II reaction.

**OR**

- 5 Discuss the different types of clearance with suitable equations.

**UNIT – III**

- 6 Describe the bioavailability procedure involved in plasma level studies.

**OR**

- 7 Explain bio equivalent study protocol with the study design.

**UNIT – IV**

- 8 Discuss one compartment open model for I.V bolus administration.

**OR**

- 9 Write the procedure involved in sigma minus method.

**UNIT – V**

- 10 State the reasons for non-linearity with respect to absorption, distribution, metabolism and elimination.

**OR**

- 11 How to determine Michaelis-Menten constant by different methods? Explain.

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