Rajiv Gandhi University of Health Sciences

Second Semester M. Pharm Degree Examination - JAN-2019

Time: Three Hours **Max. Marks: 75 Marks**

Advanced Biopharmaceutics and Pharmacokinetics

Q.P. CODE: 5170

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any Three) **3 X 10 = 30 Marks**

1. Define absorption. Discuss in detail mechanisms of drug absorption.
2. Discuss in detail one-compartment open model for a drug administered as IV infusion. Give the schematic representation, graphs and equations for the same.
3. What are the objectives and considerations in bioavailability studies?
4. Explain the different theories of dissolution process.

SHORT ESSAY (Answer any Nine) **9 X 5 = 45 Marks**

5. Explain biological factors affecting drug absorption.
6. Discuss in detail various bioequivalence study designs.
7. Define the terms relative and absolute bioavailability. Explain any two methods used to determine AUC.
8. Discuss Pharmacodynamic drug interactions.
9. Write a detailed note on *in vitro-in vivo* correlation.
10. Explain the various factors leading to non-linearity.
11. What are different compendial methods of dissolution?
12. Write the application of pharmacokinetic in the design and development of new dosage forms.
13. Discuss the significance of Michaelis - Menten equation in estimation of Km and Vmax.
14. Discuss absorption of drugs from non-per oral routes.

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