Rajiv Gandhi University of Health Sciences

Second Semester M. Pharm Degree Examination - JUNE-2019

[Time: 3 Hours] **[Max. Marks: 75]**

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. Explain the Pharmacokinetics of a drug given by IV bolus, which follows one compartment open model.
2. What is bioequivalence? Discuss in detail various bioequivalence study designs.
3. Explain various Pharmaceutical factors affecting the drug absorption.
4. Discuss in detail *in-vitro, in-vivo* correlation. Explain briefly dissolution profile comparisons.

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

5. Write a note on cytochrome P-450 based drug interactions.
6. Write a note on applications of Pharmacokinetics in targeted drug delivery systems.
7. Discuss various factors to be considered in design of a drug product.
8. Discuss the pH partition theory of drug absorption.
9. Describe various *in-situ* methods of studying drug absorption.
10. Write Michale's Menten equation. Write how do you estimate V_{max} and K_m?
11. Define bioavailability. Write a note on various methods of assessing bioavailability.
12. Discuss the various official methods of drug dissolution.
13. Write a note on Pharmacokinetics and Pharmacodynamics of proteins and peptides.
14. Discuss Noyes Whitey's equation of drug dissolution process.

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