Rajiv Gandhi University of Health Sciences

First Semester M. Pharm Degree Examination - JAN-2019

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

Biopharmaceutics and Pharmacokinetics

Q.P. CODE: 5125

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. Discuss in detail physic-chemical factors affecting the absorption of drugs.
2. Discuss the one compartmental model after the administration of **IV bolus**. How do you determine the Pharmacokinetic parameters?
3. Write on Wagner-Nelson method to determine absorption rate constant.
4. Describe *in-vitro* drug dissolution testing models. Explain their merits and limitations.

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

5. Define the terms relative and absolute bioavailability. Explain the determination of BA by urinary excretion method.
6. Define drug dissolution and explain various theories of drug dissolution.
7. Define Pharmacokinetics. Classify pharmacokinetic models. Write advantages of Pharmacokinetic model.
8. Define bioequivalence. Discuss the various considerations in bioequivalence studies.
9. Compare and contrast between active and passive transport of drugs.
10. Explain the application of Pharmacokinetics in drug development and designing of dosage forms.
11. Explain Michaelis – Menten equation in determining non-linearity.
12. Discuss in detail *in-situ* methods of determining absorption.
13. Explain BCS classification of drugs. Add a note on biowaivers.
14. Explain the influence of gastric emptying and intestinal transit time on absorption of drugs.

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