

Rajiv Gandhi University of Health Sciences, Karnataka

Second Semester M. Pharm Degree Examination - 08-Dec-2020

[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.

Answer All The Questions

10 X 7.5 = 75 Marks

1. Discuss the *in vitro* and *in-vivo* methods to determine drug absorption.
2. Discuss in detail one-compartment open model for a drug administered as IV infusion.
3. What is non-linear pharmacokinetics? How can we estimate K_{max} and V_{max} using Michaelis-Menten equation?
4. Write in detail about protein binding and its significance.
5. Discuss the various study designs for performing bioavailability studies.
6. Write Noyes-Whitney equation. What are the factors affecting dissolution rate?
7. Enumerate passive diffusion and active transport.
8. Define dissolution. Explain the various Compendial methods of dissolution.
9. Describe Cytochrome P450 based drug interactions.
10. Define drug absorption. Explain the influence of pH, pKa and partition coefficient on drug absorption.

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