

Rajiv Gandhi University of Health Sciences, Karnataka

Second Semester M. Pharm Degree Examination - 19-Mar-2021

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.

Answer All The Questions

10 X 7.5 = 75 Marks

1. Explain the Pharmacokinetics of a drug given by IV infusion, follows one compartment open model.
2. Explain Michael's Menten equation. How do you estimate K_m and V_{max} ?
3. Explain the physiological factors affecting the drug absorption.
4. Explain the various *in situ* methods for studying the drug absorption.
5. Discuss briefly BCS classification systems with examples. Write a note on *In-vitro* and *In-vivo* correlation.
6. Discuss Cytochrome P450-based drug interactions.
7. Explain in detail the application of Pharmacokinetics in new drug development and designing of dosage forms.
8. Compare and contrast passive diffusion versus active transport. Add a note on Pinocytosis and Phagocytosis.
9. Define Dissolution. Discuss any four dissolution testing models.
10. Define absolute and relative bioavailability. Explain plasma parameters to determine bioavailability.

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