

Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharm-D (Post Baccalaureate) Degree Examination – MAY 2016

Time: Three Hours

Max. Marks: 70 Marks

BIOPHARMACEUTICS AND PHARMACOKINETICS

Q.P. CODE: 2888

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

LONG ESSAYS (Answer any Two)

2 x 10 = 20 Marks

1. Define bioavailability and bioequivalence. Explain the methods to estimate the bioavailability.
2. Explain the physiological factors affecting the drug absorption.
3. Discuss in details with the help of schematic representation, graph and equations of two compartment open model for a drug given as I.V Bolus.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. How the penetration of drugs through the skin can be enhanced? Explain.
5. What is apparent volume of Distribution? How do you determine the same?
6. What do you understand by enzyme inhibition and induction in biotransformation? Explain with the help of examples.
7. What do you understand Gastric emptying and discuss the factors affecting the same?
8. Give the assumption of the compartment models.
9. Give the mono-exponential equations and explain the terms.
10. Enumerate the various "Moments" under statistical moment's theory and give their formula.
11. Explain residual method for relative and absorption.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Differentiate between relative and absolute bioavailability
13. Define Pinocytosis.
14. Give the formula for AUC determination.
15. Define pharmacokinetics.
16. What do you understand by K_m and V_m ?
17. Mention the two in-situ methods for measurement of absorption.
18. Give the Pharmacokinetic parameters with respect to absorption and elimination.
19. Explain Pore Transport.
20. What is Renal clearance? Give the formula for the same.
21. Significance of Protein binding
