

Rajiv Gandhi University of Health Sciences, Karnataka
IV Year Pharm-D / I Year Pharm-D (Post Baccalaureate) Degree Examination –
NOVEMBER 2015

Time: Three Hours

Max. Marks: 70 Marks

BIOPHARMACEUTICS AND PHARMACOKINETICS

Q.P. CODE: 2871

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. Explain the concept of compartment model. Discuss one compartment model with reference to I.V infusion.
2. Discuss minimum two factors from each group that influence drug absorption.
3. Write multi compartment models for I.V bolus administration.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

4. Comparison between I.V, oral, I.M routes of administration with special reference to plasma drug concentration profile
5. How do you estimate K_a by Wagner Nelson method?
6. Draw typical blood level curve and discuss the factors influencing blood levels following oral administration.
7. Limitations of one compartment model
8. Determination of oral bioavailability by AUC method
9. What are the factors affecting distribution of drugs.
10. Brief introduction about non-linear pharmacokinetics
11. Give a protocol for a bioavailability study.

SHORT ANSWERS

10 x 2 = 20 Marks

12. What is facilitated transport?
13. Define volume of distribution.
14. Biological half-life and its significance
15. Effect of particle size on drug dissolution
16. Define pharmacokinetics.
17. Define loading & maintenance dose.
18. Significance of bioequivalence studies
19. Represent a two-compartment model diagrammatically.
20. Minimum effective level and maximum safety level
21. Define non-competitive inhibition.
