

Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharm-D (I Year Pharm D Post Baccalaureate) / IV Year Pharm-D
(Post Baccalaureate) Degree Examination – 27-Jun-2022

Time: Three Hours

Max. Marks: 70 Marks

BIOPHARMACEUTICS AND PHARMACOKINETICS (RS & RS-2)

Q.P. CODE: 2871 / 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. Distinguish between one and two compartmental models. Describe the kinetics of drug in two compartment open model following IV bolus administration.
3. Discuss in detail the various physico-chemical factors affecting drug absorption.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. What do you understand Gastric emptying and discuss the factors effecting the same?
5. Explain the kinetics of protein binding.
6. Write a note on Catenary and mammillary model.
7. Explain the various drug transport mechanisms.
8. Explain the renal clearance of drugs.
9. Explain various pharmacokinetic parameters after oral administration of drug.
10. Write the importance of Bioavailability studies.
11. Explain statistical moment theory in non-compartmental analysis of pharmacokinetic data.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Define Pinocytosis.
13. What do you understand by K_m and V_m ?
14. Define Volume of distribution.
15. List out the factors leading to non-linearity.
16. What is multi compartment model?
17. Give the formula for AUMC and MRT.
18. Give formula for maintenance dose and loading dose.
19. Define biological half-life.
20. What is extraction ratio?
21. Define Biotransformation.
