

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 – 26-Nov-2021

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. Discuss in detail the various physico-chemical factors affecting drug absorption.
2. Discuss in detail one-compartment open model for a drug administered as IV Bolus. Give the schematic representation, graphs and equations for the same.
3. Define biotransformation. Explain examples phase I and phase II reactions.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. Explain the differences between passive diffusion and active transport.
5. Explain the kinetics of protein binding.
6. Explain statistical moment theory.
7. Explain phase I reactions.
8. Define bioavailability. Mention the objective of the bioavailability studies.
9. Explain hepatic extraction ratio and its importance.
10. Explain the various factors causing non-linearity.
11. Explain the effect of GI components on the gastric emptying rate.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Define pharmacokinetics. Give any two points of its importance.
13. What are the limitations of residual methods to calculate K_a ?
14. Differentiate between relative and absolute bioavailability.
15. Define Pinocytosis.
16. Give schematic representation of drug administered extra vascularly obeying two compartment open model.
17. What is renal clearance? Give its formula.
18. Define therapeutic equivalence and chemical equivalence.
19. Write modified Noyes Whitney's equation.
20. Name two parameters used in adjusting dosage regimen.
21. What is enzyme induction and give its importance.
