

Rajiv Gandhi University of Health Sciences, Karnataka
Sixth Semester B. Pharm Degree Examination – 06-Jun-2023

supply -

Time: Three Hours

Max. Marks: 75 Marks

BIOPHARMACEUTICS AND PHARMACOKINETICS

Q.P. CODE: 5026

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

LONG ESSAYS

2 x 10 = 20 Marks

1. Discuss in detail the various physiological factors affecting drug absorption.

OR

Define metabolism. Explain phase I reactions.

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.

SHORT ESSAYS

7 x 5 = 35 Marks

1. Explain the passive diffusion and active transport of drugs.

OR

Explain apparent volume of distribution and give its significance.

4. Explain the factors affecting renal excretion of drugs.

OR

Define bioavailability. Mention the objectives of bioavailability studies.

5. Write the importance of Compartment modeling in pharmacokinetic study.
6. How do you determine KE using rate of excretion method from urine data.
7. Define loading and maintenance dose. Give the formula for the same.
8. Explain Michaelis – Menten equation in determining non-linearity.
9. Explain the various factors leading to non-linearity.

SHORT ANSWERS

10 x 2 = 20 Marks

10. What is Polymorphism?

Define protein binding.

12. What is clearance? Give the formula for same.

13. Give the significance of bio-equivalence.

14. What are the limitations of one compartment model?

15. Write equation for zero order half life and first order half life.

16. Give the schematic representation of one compartment open model-IV infusion.

17. Plot multiple dosage regimens.

18. Compare the concept of linear and non-linear pharmacokinetics.

19. Why non-linear kinetics called dose dependent kinetics.
