

Rajiv Gandhi University of Health Sciences, Karnataka
Sixth Semester B. Pharm Degree Examination – 10-Nov-2023

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. Write a note on absorption and various mechanisms of drug absorption.
OR
Define bioavailability, classify bioavailability, and write about bioequivalence study protocol.
2. Explain determination of pharmacokinetic parameters from plasma concentration data after administration of drug by IV infusion.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Write in detail about physiological factors effecting drug absorption.
OR
Write a note on application of pharmacokinetic models.
4. Write any two methods to determine bioavailability.
OR
Explain the term in-vitro in-vivo correlation.
5. Explain the various factors leading to non-linearity.
6. Enumerate the kinetic of protein –drug binding and represent different plots.
7. Write a note on mamillary and catenary model.
8. Explain two compartment open model.
9. How do you estimate K_m and V_{max} after IV bolus administration of drug following non-linear kinetics?

SHORT ANSWERS

10 x 2 = 20 Marks

10. List out the Proteins responsible for protein binding.
11. Write Limitation of urinary excretion data for calculation of pharmacokinetics.
12. What is clinical pharmacokinetics and write its significance.
13. Define apparent volume of distribution and write its significance.
14. List out non-renal routes of drug excretion.
15. Define non-linear kinetics.
16. Define absolute and relative bioavailability. *list out the non-per extra vascular route of absorption*
17. What do you mean by central and peripheral compartment in two compartment model?
18. What are the limitations of one compartment model?
19. Why non-linear kinetics are called dose dependent kinetics?
