

Supply.

Rajiv Gandhi University of Health Sciences, Karnataka
Sixth Semester B. Pharm Degree Examination – 10-Jun-2024

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. Classify factors influencing absorption of drugs. Explain physiochemical factors in detail.
OR
Define bioavailability. Explain pharmacokinetic methods for assessment of bioavailability.
2. Discuss in detail one-compartment open model for a drug administered as I.V. infusion. Give the schematic representation, graphs and equations for the same.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Enlist various mechanisms of drug absorption through GIT, explain active transport and passive diffusion.
OR
Explain kinetics of drug protein binding.
4. Discuss the various study designs for performing bioequivalence studies.
OR
Explain various factors affecting biotransformation of drugs.
5. What are pharmacokinetic models? Explain various types with their significance.
6. Estimate one-compartment open model parameters by using the method of residuals.
7. Explain two compartment open model in brief.
8. How do you estimate K_m and V_{max} ?
9. Explain the causes of nonlinearity.

SHORT ANSWERS

10 x 2 = 20 Marks

10. What is Pinocytosis and phagocytosis?
11. What is the effect of food on absorption of drugs?
12. Define biotransformation.
13. Write the formula to calculate hepatic extraction ratio.
14. What is zero order reaction?
15. Draw the blood level profiles for oral administration.
16. Define dosing frequency.
17. What are the limitations of one compartment model?
18. Name two parameters used in adjusting dosage regimen.
19. Give Michaelis-Menton equation. Explain the terms.
