

Rajiv Gandhi University of Health Sciences, Karnataka
Sixth Semester B. Pharm Degree Examination – 23-Nov-2021

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. Define drug absorption. Explain various mechanisms of drug absorption through GIT.
OR
Define bioavailability. Discuss the different methods for measurement of bioavailability.
2. Explain determination of pharmacokinetic parameters from plasma concentration data after administration of drug by I.V. infusion.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Explain the factors affecting protein binding of drugs.
OR
Write a note on tissue permeability of drugs.
4. Define metabolism. Write a note on Glucuronidation.
OR
Write a note on non renal excretion of drugs.
5. What are pharmacokinetic models? What is the importance and utility of such models?
6. Discuss about the blood level curves of a drug administered by I.V. bolus and oral routes.
7. Explain in brief what is multi compartment model?
8. Explain about Michaelis - Menten's equation?
9. How do you estimate K_m and V_{max} after i.v. bolus administration of drug following non-linear kinetics?

SHORT ANSWERS

10 x 2 = 20 Marks

10. Define biopharmaceutics and drug protein binding.
11. How components of gastrointestinal fluid affect absorption of drugs?
12. Define absolute and relative bioavailability.
13. What is BCS classification of drugs?
14. What factors affect half life of the drugs?
15. Define volume of distribution, Write its importance.
16. Define loading dose and maintenance dose.
17. What is the significance of K_m and V_{max} ?
18. Compare the concept of linear and non linear pharmacokinetics.
19. Why is it important to monitor drug levels carefully for dose dependency?
