

Rajiv Gandhi University of Health Sciences, Karnataka

Sixth Semester B. Pharm Degree Examination – 10-Dec-2020

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.

LONG ESSAYS (Answer any Two)

2 x 10 = 20 Marks

1. List the various processes through which drugs can cross the biological membrane. Describe absorption of drugs from non per oral extra-vascular routes.
2. Explain various methods to enhance the dissolution rate of poorly soluble drugs.
3. Explain determination of pharmacokinetic parameters from plasma concentration data after administration of drug I.V.bolus.

SHORT ESSAYS (Answer any Seven)

7 x 5 = 35 Marks

4. Define biopharmaceutics and discuss its role in formulation development.
5. Write in detail about protein binding and its significance.
6. Write a note on renal excretion of drugs.
7. Explain bioequivalence studies.
8. Discuss about the blood level curves of a drug administered by I.V. infusion and oral routes.
9. What are pharmacokinetic models? Explain various types with their significance.
10. Estimate one compartment model parameters by using the method of residuals.
11. Explain about Michaelis - Menten's equation?
12. Write a note on determination of K_m and V_{max} at steady state concentration.

SHORT ANSWERS (Answer All)

10 x 2 = 20 Marks

13. What is hepatic first pass effect?
14. What is the influence of GI pH on drug absorption?
15. Enlist objectives of bioavailability studies.
16. Define clearance. What is its unit?
17. Define C_{max} and AUC.
18. Define apparent volume of distribution and give the mathematical equation to calculate it.
19. Define loading dose and maintenance dose.
20. What do you mean by central and peripheral compartment in two compartment model?
21. Define dose dependent kinetics.
22. Compare the concept of linear and non linear pharmacokinetics.
