

Supply

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Sixth Semester B. Pharm Degree Examination – 08-May-2025**

**Time: Three Hours**

**Max. Marks: 75**

**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. Explain pharmaceutical factors influencing drug absorption through GIT  
**OR**  
Explain determination of pharmacokinetic parameters from plasma concentration data after administration of drug through I.V. bolus
2. Write in detail about various approaches for improving dissolution of poorly soluble drugs

**SHORT ESSAYS**

**7 x 5 = 35 Marks**

3. Explain the factors causing non linearity  
**OR**  
Explain steady state drug level and calculation of loading doses
4. Explain about bioequivalence studies  
**OR**  
What are pharmacokinetic models? Explain various types with their significance
5. Explain tissue permeability of drugs in detail
6. Write about clinical significance of protein binding of drugs
7. Write the objectives and significance of non-linear pharmacokinetics
8. Explain two compartment open model
9. Write about methods to enhance the dissolution rate

**SHORT ANSWERS**

**10 x 2 = 20 Marks**

10. What is the apparent volume of distribution?
11. Bioequivalence
12. Bioavailability
13. Renal clearance
14. Application of pharmacokinetics
15. Define  $C_{max}$  and AUC
16. Maintenance dose
17. Define intravenous bolus injections
18. Enlist various drugs that follows non linear pharmacokinetics
19. Compare the concept of linear and non-linear pharmacokinetics

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