Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharm-D / I Year Pharm-D (Post Baccalaureate) Degree Examination – MAY 2016

Time: Three Hours **Max. Marks: 70 Marks**

BIOPHARMACEUTICS AND PHARMACOKINETICS

Q.P. CODE: 2871

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. Discuss metabolism of drugs by oxidation and reduction with examples
2. Discuss patient- related factors affecting drug absorption
3. Explain factors affecting distribution of drugs

SHORT ESSAYS (Answer any six) **6 x 5 = 30 Marks**

4. Explain passive transport mechanism of drug absorption
5. Discuss Noyes and Whitney dissolution rate law.
6. Describe any four approaches to improve dissolution of poorly soluble drug.
7. Half life of drug Y is 1.2 hours. It is administered at an intravenous bolus dose of 50mg and showed initial plasma concentration of 0.78 mcg/ml. calculate total clearance and volume of distribution
8. Give the approach in detail for noncompartmental analysis
9. Explain pharmacokinetic methods to measure bioavailability
10. Explain statistical considerations in bioequivalence
11. Describe mammillary compartment model

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Give the mechanism of endocytosis in absorption of drugs
13. Explain solid dispersions in enhancement of bioavailability
14. What are the objectives of bioavailability studies?
15. When delayed gastric emptying is desirable?
16. How do dosage form manufacturing variables affect absorption of drugs?
17. How does nonlinearity in drug distribution occur?
18. Define bioequivalence and apparent volume of distribution
19. What is the influence of size of counter ion on solubility of salt forms of the drugs?
20. What are the applications of developing in vitro in vivo correlation?
21. Enlist in vitro experiments to study drug uptake.

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