Rajiv Gandhi University of Health Sciences, Karnataka

IV Year Pharma-D (Post Baccalaureate) Examination - Mar 2013

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

BIOPHARMACEUTICS & 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. Explain various approaches to improve the dissolution of poorly soluble drugs
2. What are the advantages of Non compartment models over compartment modeling? Discuss in brief the statistical moment theory, mean residence time and physiologic models
3. Define the terms Dosage Regimen, loading dose and maintenance dose. What are the various way of monitoring drug therapy in individual patient?

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

4. Discuss absorption of drugs by active transport
5. State the pH partition hypothesis briefly. On what assumptions this statement is based
6. Why are first-order processes said to follow linear kinetics? Explain
7. The parameter K_E has different meanings for one-and two-compartment models – Explain
8. What are the merits and demerits of Wagner-Nelson method in computing K_a?
9. Discuss Glucuronidation in Phase II reactions
10. Discuss the causes of Nonlinearity in pharmacokinetics
11. What is the criteria for obtaining valid urinary excretion data?

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

12. It is better to express V_d in litres/kg body weight. Why?
13. What are the 2 major sources of variability in drug response?
14. What is flip-flop phenomenon and when it is observed?
15. What are drug metabolizing organs?
16. Why is bio equivalency studies always performed in healthy human volunteers?
17. Define zero order process. Give the equation for zero order half life
18. How Crohn's disease affects drug absorption?
19. In compartment modeling what does the term 'open' mean

20 Define minimum effective concentration and maximum safe concentration

21. Define enzyme induction and auto-induction

*****