

# Rajiv Gandhi University of Health Sciences, Karnataka

Fifth Year Pharma- D Post Baccalaureate Degree Examination – Feb/March 2011

**Time: Three Hours**

**Max. Marks: 70 Marks**

## CLINICAL PHARMACOKINETICS & THERAPEUTIC DRUG MONITORING

**Q.P. CODE: 2876**

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 in detail Hemodialysis
2. Explain the various methods for estimating dosage regimens in uremic patients
3. What is population pharmacokinetic data? Explain in detail the methods adopted in analysis of such data

### **SHORT ESSAYS (Answer any six)**

**6 x 5 = 30 Marks**

4. Explain the role of liver enzymes in drug interactions with examples
5. Explain the principle and method of dosage adjustment in geriatrics
6. Explain the role of P-glycoprotein in bioavailability of drugs
7. Define and explain Bayesian theory.
8. Explain the TDM of Cyclosporin.
9. Define and explain the significance of Pharmacokinetic drug interactions with examples.
10. Explain the major considerations in TDM studies
11. Explain how Renal and hepatic diseases affect protein binding of drugs. How are these changes accounted for dose adjustment?

### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

12. What is inulin clearance? Explain
13. Explain the application of Nanograms
14. Enumerate the different methods of designing dosage regimens
15. Write the equation defining the relationship between dose and duration of activity for single iv bolus injection
16. Define genetic polymorphism.
17. Enumerate the factors affecting dailyzability of drugs
18. Explain the various liver function tests and their significance
19. What are the assumptions made when adjusting the dosage regimen based on creatinine clearance during renal failure
20. Write the significance of Pharmacokinetic-Pharmacodynamic correlation.
21. Calculate the creatinine clearance for a child (8 years, body length 122cm) whose serum creatinine value is 0.9 mg/dl.

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