

# Rajiv Gandhi University of Health Sciences, Karnataka

V Year Pharma-D Post Baccalaureate Degree Examination – Mar 2013

**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. Define TDM. Discuss the indications for TDM. Explain the role of clinical pharmacokineticist in TDM of drugs
2. Explain with suitable examples how the dose and elimination half life of a drug influence the duration of activity
3. Define nomograms. Explain how they are useful in pharmacokinetic studies. What are their advantages & disadvantages

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

**6 x 5 = 30 Marks**

4. Explain the principle of drug dosing in elderly
5. Why phenytoin is a drug for TDM. Explain
6. Explain the role of genetic polymorphism in drug metabolism. Give suitable examples
7. Explain the NONMEM method of analysis of population pharmacokinetic data
8. Explain briefly Hemodialysis
9. Define pharmacokinetic drug interactions with examples. Add a note on effect of enzyme induction on drug interaction
10. Explain the different methods of determining glomerular filtration rate
11. Define and explain Bayesian theory

### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

12. How do you adjust dose of a drug in renal impairment with constant dosing interval
13. Give examples of drug interactions affecting bioavailability of drugs
14. Write the principle in converting IV dose to oral dose
15. Child dose is not the same as adult dose. Why?
16. Give examples of hepatic markers and their importance
17. Explain a typical plot of pharmacologic response versus drug dose
18. Enumerate four causes of renal dysfunction
19. What is meant by dosing with feedback
20. Write the factors influencing individualisation of drug dosage regimen
21. Calculate creatinine clearance in an 85 year old female weighing 190 lbs, with serum creatinine concentration of 1.5 mg/100ml