

Rajiv Gandhi University of Health Sciences, Karnataka

V Year Pharma-D Post Baccalaureate Degree Examination – Sep 2012

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. What is Bayesian theory? Explain with a suitable example. Briefly explain the concept of dosing with feedback.
2. Explain the basis and different methods of dose adjustment in uremia condition
3. Write a typical protocol for TDM of a drug. Explain the TDM of Cyclosporine.

SHORT ESSAYS | (Answer any six)

6 x 5 = 30 Marks

4. Explain the methods of determining creatinine clearance.
5. Dosage adjustment in Pediatrics is essential. Explain mentioning the different methods used in child dose calculation
6. Discuss the effect of hepatic diseases on Pharmacokinetics
7. Explain the principle of conversion of drug dose from intra-venous to oral route with an example
8. Explain with examples how drug efflux transporters influence the bioavailability of drugs
9. How does elimination half life influence the duration of activity of drugs? Give examples.
10. What is extracorporeal removal of drugs? Explain.
11. Explain the importance of enzyme induction and inhibition in drug interactions with examples.

SHORT ANSWERS

10 x 2 = 20 Marks

12. What are the factors influencing individualization of drug dosage regimens
13. Give examples of drug interactions influencing drug elimination
14. Write the applications of nomograms
15. Enumerate the methods used to determine GFR
16. What is the NONMEM model and what is its application?
17. The maintenance dose of Gentamicin is 80 mg every 6 hours in a patient with normal renal function (normal creatinine clearance of 100 ml/min). calculate the dose for a uremic patient with creatinine clearance of 20ml/min (given $K_u/K_N = 0.2$)
18. Define genetic polymorphism and give examples
19. List the factors influencing dialyzability of drugs
20. What are hepatic metabolic markers? Give examples.
21. Dosing of drugs in obese patients is important. Why?