Rajiv Gandhi University of Health Sciences, Karnataka

V Year Pharm-D (II Year Pharm D Post Baccalaureate) / V Year Pharm-D Degree Examination – NOV 2017

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

CLINICAL PHARMACOKINETICS & THERAPEUTIC DRUG MONITORING

Q.P. CODE: 2876 / 2892

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 the importance of genetic polymorphism of cytochrome P-450 isozymes on drug metabolism with suitable examples.
2. a) What are nomograms? Explain their applications in pharmacokinetic studies with examples. Give their advantages and disadvantages.
   b) Explain the sampling design used in population pharmacokinetic study
3. Enumerate and explain various factors in individualizing drug dosage forms

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

4. Explain the role of clinical pharmacist in TDM.
5. Explain the influence of drug interaction on drug absorption with examples.
6. Describe the methods of measurement of GFR and their significance.
7. Give the reasons for conducting population pharmacokinetic study
8. Explain the sigmoidal Emax model in PK/PD correlation.
9. What is the creatinine clearance for a 25 year old male patient with a serum creatinine of 1mg/dL? The patient is 5 ft, 4inches in height and weighs 103 Kg.
10. Explain various factors considered in the design of dosage regimen for obese patient.
11. Define TDM. Discuss the indications for TDM of drugs.

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

12. Give the assumptions of compartment model.
13. Give any two formulae for the calculation of paediatric dose.
14. Calculate creatinine clearance for a 30 year old female patient with a serum creatinine value of 0.8 mg/dl. The patient is 5 ft 1 inch tall and weighs 69 kgs.
15. Give Bayesian equation.
16. Give the relationship between half-life and elimination rate constant.
17. Write the protocol for TDM of a drug.
18. Name the metabolic markers used in liver function test with their normal values.
19. What do you understand by Goodness of Fit plot
20. Define nomograms and tabulations.
21. Give any two examples for clinically important genetic polymorphism of drug targets

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