Rajiv Gandhi University of Health Sciences, Karnataka

V Year Pharm-D (II Year Pharm D Post Baccalaureate) / V Year Pharm-D Degree Examination – 21-Jan-2020

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

CLINICAL PHARMACOKINETICS AND 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. What are nomograms? Explain their applications in Pharmacokinetic studies with examples. Give their advantages and disadvantages.
2. Enumerate the various causes for renal impairment. Discuss in detail the PK considerations in the renal failure patients.
3. Explain the necessity and process of TDM in patients receiving lithium.

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

4. Explain the sampling design used in POPPK study.
5. Explain the various pharmacokinetic drug interactions with suitable examples.
6. Explain the effect of age and body weight in individualization of drug dosage regimens.
7. Describe the Wagner method for the dose adjustment in uremic patients.
8. Discuss the factors to be considered in designing the dosage regimen.
9. Describe the role of genetic polymorphism in drug targets.
10. Describe hemodialysis with its advantages and disadvantages.
11. Explain with suitable example how elimination half-life of a drug influences the duration of activity.

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

12. Define loading dose and maintenance dose. Give equations to calculate the same.
13. List the markers used in the measurement of GFR.
14. Differentiate between inter-individual variation and within subject variation.
15. What is clearance? Give the relationship between clearance and AUC.
16. Give any two examples for clinically important genetic polymorphism of drug transporters.
17. Add a note on BEER's criteria for drugs used in geriatric patients.
18. Give the Jellife's equation for the measurement of creatinine clearance.
19. Give the assumptions of one compartment modeling
20. List various software's used for conducting POPPK analysis.
21. Give MDRD equation for the measurement of creatinine clearance.

*****