

**Q.P. Code: 203340**

**Reg. no.: .....**

**Second Pharm D Post Baccalaureate Degree Supplementary  
Examinations June 2023**

**Paper III - Clinical Pharmacokinetics and Pharmacotherapeutic Drug Monitoring**

**Time: 3 Hours**

**Total Marks: 70**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essays:**

**(3x10=30)**

1. Explain the necessity and process of TDM in patients receiving cyclosporine and carbamazepine.
2. Explain in detail the different methods of extracorporeal removal of drugs.
3. Explain the various factors considered in the design of dosage regimen for geriatric and obese patients.

**Short notes:**

**(8x5=40)**

4. Write short notes on pharmacokinetic drug interactions with suitable examples for each type.
5. Explain the effect of age and body weight in the individualization of the drug dosage regimen.
6. Explain the relationship between the dose and pharmacological effect of a drug.
7. Explain nomograms in designing dosage regimen.
8. Explain the various pharmacokinetic changes observed in patients with renal impairment.
9. Describe peritoneal dialysis with its advantages and disadvantages.
10. An adult female patient (50 years old, 56 kg) whose serum creatinine is 2.7 mg/dL is to be given gentamicin sulphate. The usual dose of gentamicin in adult patients with normal renal function is 1 mg/kg every 8 hours by multiple IV bolus injections. Calculate the appropriate dosage regimen of gentamicin sulfate for this patient.
11. Describe the genetic polymorphism in CYP2D6 and 2C9 isozymes.

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