

**Second Semester M. Pharm Degree Supplementary Examinations  
February 2025**

**M.Pharm (Pharmacy Practice)**

**Paper III: Clinical Pharmacokinetics and Therapeutic Drug monitoring  
(MPP 203T)**

**(Common for 2017 and 2019 Scheme)**

**Time: 3 Hours**

**Total Marks: 75**

- *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 impact of renal failure and hepatic failure in pharmacokinetics and dosage adjustments.
2. Explain the protocol for Therapeutic Drug Monitoring (TDM) and explain TDM of gentamycin, digoxin and phenytoin.
3. Explain various types of pharmacokinetic interactions with examples.

**Short Notes**

**(9x5=45)**

4. Describe four mechanisms in enzyme induction.
5. Briefly explain pharmacometrics softwares.
6. Discuss on Non-linear Mixed effect Model approach.
7. Explain the criteria and methods of conversion from Intravenous dosage to oral dosing with appropriate examples.
8. Explain the dosage adjustment in pregnancy.
9. Describe nomograms and tabulations with their applications.
10. Explain Bayesian theory with an example.
11. Explain the genetic polymorphism in CYP 3A4 and 2D6 isozymes in drug metabolism.
12. Explain adaptive methods of dosage adjustment.

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