

QP CODE: 213327

Reg. No:.....

**Second Semester M. Pharm Degree Regular/Supplementary Examinations
November 2025
M.Pharm (Pharmaceutics)**

**Paper III: Computer Aided Drug Development (MPH 203T)
(Common for 2019 and 2024 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. Enumerate about Legal protection of innovative uses of computers in Research and Development.
2. Explain the computer simulations in isolated tissues and genes.
3. Outline the QbD concept in pharmaceutical product development with respect to ICH guidelines.

Short Notes

(9x5=45)

4. Different levels of invitro and invivo correlation.
5. What is Artificial Intelligence. Mention its application.
6. What is optimization. and discuss the popular experimental design for optimization,
7. Explain optimal design and population modeling.
8. Explain the terms hPEPT1, ASBT, OCT, OATP and BCRP.
9. Describe the role of P – glycoprotein receptor inhibition in optimal drug delivery.
10. Mention the types of pharmaceutical automation. Explain its current challenges.
11. What is Computational Fluid Dynamics (CFD) and give its application in pharmacy.
12. How fed vs fasted state impacts strategy for oral absorption prediction.
