

**QP CODE: 213327**

**Reg. No:.....**

**Second Semester M. Pharm Degree Regular/Supplementary Examinations  
November 2024  
M.Pharm (Pharmaceutics)**

**Paper III: Computer Aided Drug Development (MPH 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 history and applications of computers in pharmaceutical research and development.
2. What is the need for computational modelling in drug disposition. What are the techniques of drug disposition.
3. What is computational fluid dynamics and how it is applicable to the pharmaceutical industry.

**Short Notes**

**(9x5=45)**

4. Use of computers in biopharmaceutical characterization.
5. Computers in clinical development.
6. Nucleoside transporters.
7. Application of computer aided techniques in development of pharmaceutical emulsion.
8. Artificial intelligence and robotics in pharmaceutical automation.
9. Regulation of computer systems.
10. Optimal design and population modeling.
11. ICH Q8 guidelines.
12. Briefly write the usage of computers in market analysis.

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