QP CODE: 213327   **Reg. No:…………………**

Second Semester M. Pharm Degree Supplementary Examinations
September 2022
M.Pharm (Pharmaceutics)

Paper III: Computer Aided Drug Development (MPH 203T)

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 patents as an IPR tool for protection of innovative uses of computers.

2. Describe parameter sensitive analysis, virtual trials, model construction and ACAT model with respect to computer aided biopharmaceutical characterization of drugs.

3. Explain the future direction of artificial intelligence in pharma. Discuss the role of computational fluid dynamics in pharmaceutical industry

Short Notes   **(9x5=45)**

4. Explain the statistical modelling in pharmaceutical research and development

5. Discuss the levels of computer simulations in pharmacokinetics and pharmacodynamics.

6. Write the steps of quality by design. Explain the role of ICH Q8 guideline in quality by design.

7. Write about different computational approaches used in modelling the solubility of drugs.

8. Discuss the factors to be considered and computational modelling techniques to study intestinal permeation.

9. Explain the approaches used in modelling the solubility of drug molecules.

10. Brief various levels in computer simulation.

11. Explain the application of machine learning in pharma industries

12. Discuss the use of computers in market analysis

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