

**School of Medical and Allied Sciences****Master of Pharmacy in Pharmaceutics  
Semester End Examination - Jun 2024****Duration : 180 Minutes  
Max Marks : 75****Sem II - MPH203T - Computer Aided Drug Delivery System**General Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

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|-----|---|-------|
| 1)  | Infer the importance of Factorial design.   | K2(2) |
| 2)  | Explain various types of Modeling Techniques.   | K2(2) |
| 3)  | What is Population Modeling?  | K1(2) |
| 4)  | Outline the Concept of optimization.  | K2(2) |
| 5)  | Define In vitro dissolution .   | K1(2) |
| 6)  | Interperate the Active Transport.   | K2(2) |
| 7)  | How Parameter sensitivity analysis is performed?  | K1(2) |
| 8)  | Outline the role of BBB-Choline Transporter.  | K2(2) |
| 9)  | What is QbD?  | K1(2) |
| 10) | List out the advantages of parameter sensitivity analysis in gastrointestinal absorption simulation | K1(2) |
| 11) | Construct importance of Computer Simulations in Pharmacokinetics and Pharmacodynamics.              | K3(5) |

**OR**

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|-----|--|-------|
|     | Construct the importance of in vitro dissolution and in-vitro in-vivo correlation.   | K3(5) |
| 12) | Organise Historical developments of the role of Computers in Pharmaceutical Research and Development.                          | K3(5) |
| 13) | Inspect various role of nanotechnology in enhancing drug delivery systems, especially in the context of ocular administration? | K4(5) |
| 14) | Organize the Modeling Techniques & Importance of ASBT in drug disposition.   | K3(5) |
| 15) | Analyze the role of Nucleoside Transporters.   | K4(5) |
| 16) | Classify Optimization parameters.  | K4(5) |

**OR**

Examine importance of BBB-Choline Transporter.

K4(5)

- 17) Analyze how can the pharmaceutical industry address the interoperability challenges associated with integrating AI technologies into existing workflows and systems? K4(5)
- 18) Elaborate the BBB-Choline Transporter & Nucleoside Transporters. K6(10)
- 19) Estimate the ethical considerations should be prioritized when leveraging patient data for AI-driven healthcare solutions, and how can these concerns be effectively addressed? K5(10)

**OR**

Conclude about the role of the pharmaceutical emulsions and microemulsion drug delivery carriers.

K5(10)