**QP CODE: 212327** **Reg. No:……**

## Second Semester M. Pharm Degree Regular/Supplementary Examinations May 2022
## M.Pharm (Pharmaceutics)

## Paper II: Advanced Bio-Pharmaceutics and Pharmacokinetics (MPH 202T)

**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. Derive all possible pharmacokinetic parameters using one compartment model for I.V. infusion.

2. Describe the pharmacokinetics and pharmacodynamics of biotechnology drugs.

3. Discuss the physicochemical factors influencing drug absorption

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

4. Objectives and approaches in in vitro-in vivo correlation

5. Explain pH-partition theory.

6. Application of pharmacokinetics in modified release drug products.

7. Noyes-Whitney equation.

8. Cytochrome p450 based drug interaction.

9. Methods of dissolution testing.

10. Clinical significance of bioequivalence studies.

11. Bio-pharmaceutics classification system.

12. A drug [dose 100mg] is administered as oral tablet and I. V. Bolus injection to subjects. Calculate the bio availability of the drug using pharmacokinetic data given below

| ROUTE | AUC[mg] h/l | U∞[mg] |
|---|---|---|
| I V | 1.93 | 10.5 |
| Oral | 0.22 | 1.22 |

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