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**M. Pharmacy 1st Semester Examination**

**Biopharmaceutics**

**MP-112**

**Time : 3 Hours**

**Max. Marks : 90**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**SECTION - A**

**(Answer any one question)**

1. Explain in detail with relevant examples about fundamental principles of Biopharmaceutics. How do you determine bioavailability, absolute bioavailability and relative bioavailability?

OR

2. Describe and compare various routes of drug administration. What are the advantages and disadvantages of different routes of administration? (1×25=25)

**SECTION - B**

**(Answer any two questions)**

3. Write physicochemical factors influencing drug absorption from the GIT.
4. Explain various *in-vitro* evaluation methods of drug dosage forms.
5. What is the significance of pharmacokinetics in the NDA submission? (2×15=30)

**SECTION - C**  
**(Answer any seven questions)**

6. Define the concept of bioequivalence.
7. Write methods of documenting bioequivalence.
8. Write a short note on surfactants.
9. Write a short note on dissolution test.
10. List various physiological factors influencing drug absorption.
11. Write a short note on drug dissolution constant (pka).
12. What is polymorphism?
13. What is the importance of surface area in drug absorption?
14. What is influence of polymorphism on solubility? (7×5=35)