

Faculty of Pharmacy
B.Pharm. Semester-V Examination
BIOPHARMACEUTICS-I

Paper—T-5.6

Sections—A & B

Time—Three Hours]

[Maximum Marks—60

INSTRUCTIONS TO CANDIDATES

- (1) All questions carry marks as indicated.
- (2) Answer **ALL** questions from Section A and **ALL** questions from Section B.
- (3) Illustrate your answers wherever necessary with the help of neat sketches.

SECTION—A

1. Define the following terms and discuss their significance in brief : 6
 - (a) Absorption
 - (b) Distribution
 - (c) Metabolism
 - (d) Excretion.
2. What are the physiologic factors affecting oral absorption ? Discuss G.I. physiology and gastric emptying in detail. 6

OR

Discuss dosage form factors affecting drug absorption.

6

3. How does a drug distribute in various body fluids ?
Discuss in detail. 6

OR

Describe the different barrier in drug distribution.

6

4. Discuss plasma-protein binding in details, with its significance. 6
5. Write short notes on (any TWO) : 6
- (a) Active transport process
 - (b) Malabsorption
 - (c) Tissue binding of drugs
 - (d) Diseases affecting absorption.

SECTION—B

6. What do you mean by Biotransformation ? Discuss Phase-I reactions in brief. 6
7. What do you understand by the term "Renal-clearance" ? How is it expressed in terms of renal excretion processes ? 6

OR

Describe non-renal excretion of drugs. 6

8. Define Bioavailability, enlist objectives of bioavailability studies and discuss the pharmacodynamic methods of bioavailability measurement. 6

OR

Enlist the methods of bioavailability enhancement and discuss any four in detail. 6

9. Describe in-vivo-bioequivalence studies in detail. 6
10. Write short notes on (any TWO) : 6
- (a) Active metabolites
 - (b) Drug dissolution and bioavailability
 - (c) Inhibition of metabolism.