



- Notes :
1. All questions carry equal marks.
  2. Questions No. **1** is compulsory and Solve **any four** from remaining.
  3. Illustrate your answers wherever necessary with the help of neat sketches.

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| <b>1.</b> | <b>Solve any four.</b>   | <b>16</b> |
|           | i) Biopharmaceutical classification System.  |           |
|           | ii) Concept of clearance.  |           |
|           | iii) Carrier mediated transport.   |           |
|           | iv) Volume of Distribution.  |           |
|           | v) In-Vitro. In vivo correlation.  |           |
|           | vi) $P^H$ - partition hypothesis.  |           |
| <b>2.</b> | Define Bioavailability. Give its purpose and methods to determine it.                                      | <b>16</b> |
| <b>3.</b> | a) Discuss cell membrane structure and physiology. Discuss <u>Passive</u> Diffusion method for absorption. | <b>8</b>  |
|           | b) Discuss about Renal Excretion process.  | <b>8</b>  |
| <b>4.</b> | a) Explain Rate and order of Reaction.   | <b>8</b>  |
|           | b) Write note on Plasma-Protein binding in detail.   | <b>8</b>  |
| <b>5.</b> | a) Discuss about factors affecting drug distribution.  | <b>8</b>  |
|           | b) Write note on Non-oral route of drug absorption.  | <b>8</b>  |
| <b>6.</b> | a) Define Biotransformation. Explain Glucuronide conjugation reaction.                                     | <b>8</b>  |
|           | b) Explain about applications of prodrugs.   | <b>8</b>  |
| <b>7.</b> | Discuss factors affecting protein binding and kinetics of protein binding.                                 | <b>16</b> |

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