

③ Pharmacy is the art, practice or profession of preparing, preserving, compounding & dispensing of drug.

## PHARMA

### Introduction to pharmacy

2 Marks

1. Who is called as father of pharmacy? → Galen is F. of Phar. William Procter is founder of pharmacy (1902).
2. Who is father of Indian pharmacy? → Mahadeva Lal Schroff.
3. Define pharmacy? → The art
4. Define Biopharmaceutics?
5. Define Bioavailability?
6. What is drug disposition?
7. Define drug distribution.
8. Define elimination.
9. What is biotransformation?
10. Define excretion.
11. Define pharmacokinetics.
12. What is ADME?
13. What is KADME?
14. Define metabolism?
15. Define pharmaceutical phase? → It is the phase the drug development is the process of bringing new pharmaceutical drug.
16. Define pharmacodynamic phase? → The clinical & pre clinical study of drug.
17. What is therapeutic phase? → Drug administration, drug dose, time interval & treatment duration.
18. What is dosage regimen? →
19. What are metabolites?
20. Define absorption.
21. Define Drugs?
22. What are the sources of drug extraction?
23. What are the different routes of drug administration?
24. Define drug administration?
25. What are the phases involved in clinical pharmacokinetics?

5 Marks

1. Describe the therapeutic phase briefly?
2. Write about pharmacokinetic phase?
3. Write a short note on pharmacodynamics?
4. Write down the schematic representation of pharmacokinetic process?
5. Briefly explain Biopharmaceutics?

7 Marks

1. Define pharmacy? Write down the scope of pharmacy?
2. Briefly explain the drug administration process. Write down the phase's involved in it?
3. What is drug therapeutics? Explain with the schematic representation involved in it?

### Chapter-2

### Drug kinetics and Bio pharmaceutics

2 Marks

1. Define drug absorption.
2. Define transcellular transport.
3. Describe paracellular transport?
4. Define vesicular transport?
5. Define intracellular transport?
6. Define intercellular transport?
7. What is passive transport process?
8. What is active transport process?
9. What are the factors affecting ADME?
10. Define drug dissolution?
11. What are microsomal enzymes?
12. What are non-microsomal enzymes?
13. Which organ is responsible for the major drug metabolism process?
14. Define hepatic metabolism?
15. Define extra-hepatic metabolism?
16. Define phase-I reaction?
17. Define phase-II reactions?
18. Write down the different organs involved in drug metabolism?
19. What is hydrophilicity?
20. What is lipophilicity?
21. What are xenobiotics?
22. Who first gave the pathway for drug biotransformation?
23. What are toxins?
24. Define detoxification reactions?
25. Define conjugation reactions?
26. What is an oxidative reaction?
27. What are reductive reactions?
28. Define excretion and what are its types?
29. What is renal excretion of drugs?
30. What is non-renal excretion of drugs?
31. Define bioequivalence?

5 Marks

1. Describe Absorption?
2. Describe Metabolism?
3. Briefly explain excretion process?
4. Write a short note on phase-I reaction?
5. Write a short note on phase-II reactions?
6. What are drug-metabolizing enzymes? What are its types?
7. What is the need of drug Biotransformation?
8. Write a short note on Biotransformation?
9. Briefly explain the types of Bioequivalence.

7 Marks

1. What are rate limiting steps? Write about its role in drug administration?
2. Write about the factors influencing the GI absorption of drugs?
3. Briefly explain the renal excretion of drugs with proper diagrams?
4. Define Bioequivalence? What are its different types? Write about the advantages and disadvantages?

**Chapter-3**  
**(Principles of drug manufacture )**  
**2 Marks**

1. Define dosage form ?
2. What is Capsule ?
3. What is tablet ?
4. What is emulsion ?
5. What is Syrup ?
6. What is exillier ?
7. What is suspension ?
8. Define granulation ?
9. What are powders ?
10. What are the different forms of drugs ?

5 Marks

1. How drugs are classified ? What are the different drugs depending on their nature and shape ? Write about them briefly ?

2. Write short note on

- (1) Emulsion
- (2) Suspension
- (3) Syrup
- (4) Granulation
- (5) Tablets
- (6) Capsule
- (7) Sugar coated tablets
- (8) Coated tablets
- (9) Enteric coated tablets
- (10) Powders

7 Marks

1. What are different formulation factors that effect the manufacturing process ?
2. Write about the pharma co technical factors or dosage form ?

**Chapter-4**  
**(Biopharmaceutics)**  
**(2 Marks)**

1. Define pharmacokinetics ?
2. Define pharmacodynamics ?
3. What are monoclonal antibodies ?
4. What are vaccine ?
5. What is yene Therapy ?
6. What are antibodies ?
7. What are homones ?
8. Define therapecutics ?

9. Define recombinant therapeutics ?  
10. Define pharmacology ?

5 Marks

1. What are monoclonal antibodies ? How they are produced ?
2. What is the pharmacological process ? Briefly write about the process ?
3. How pharmacodynamics and pharmacokinetics are related to each other ?

7 Marks

1. What are vaccine ? How they can be produced and used in different field of pharma ?
2. What are antibodies ? What are different classes of antibodies that are present in immune system ?

### Chapter-5

### Immunogenicity of Biopharmaceuticals

2 Marks

1. What are immunogens ?
2. Who imports immunogenicity ?
3. What are the product related factors ?
4. What are the host related factors ?
5. What are erythropoietins ?

5 Marks

1. Write a short note on insulin ?
2. Write briefly about DNase ?
3. What is activated protein C ? Write about its application ?
4. Write a short note on factor IX ?

7 Marks

1. Write about the case studies of insulin, erythropoietin, factor IX, factor VIIa, DNase. \_\_\_\_\_