

## 2.16 40137 BIO PHARMACY

### GENERAL EDUCATIONAL OBJECTIVES:

1. To study about the introduction to pharmacy
2. To study in detail about Pharmacognosy
3. To study in detail about Pharmacology
4. To study in detail about Pharmaceutics
5. To study in detail about Industrial Pharmacy

### UNIT-1 INTRODUCTION TO PHARMACY

- 1.1 Introduction
- 1.2 Relationship between Pharmacy and Biotechnology
- 1.3 Streams of pharmacy – Pharmacognosy, Pharmacology, Pharmaceutics
- 1.4 Introduction to Pharmacopeia with special reference to the Indian Pharmacopeia,
- 1.5 Scope of Pharmacy

### UNIT-2 PHARMACOGNOSY

- 2.1 Definition
- 2.2 History & scope of Pharmacognosy including indigenous systems of medicines.
- 2.3 Various systems of classification of drugs of natural origin: Biological source, geographical source, active constituents and use of following categories of drugs- laxatives, cardiotonics, drugs acting on nervous systems, antihypertensive, antitussives, antirheumatics, antitumour, antidiabetics, antiseptics, diuretics, antimalarial, enzymes, vitamins, perfumes & flavoring agents.
- 2.4 Pharmaceutical aids- Concept & applications with example
- 2.5 Extraction of drug from different sources like plant, animal & mineral: Introduction, role of solvents, methodology.

### UNIT-3 PHARMACOLOGY

- 3.1 Introduction and pharmacological classification of drugs and its mode of action – Analgesic, antipyretics, Antinflammatory, antirheumatics, muscle relaxants, antiparkinsonism, antihypertensive, bronchodilators, expectorants, antacids, antihistamic drugs, antibiotics, laxatives, drugs acting on blood, blood forming organs, drug affecting renal function, hormones, & hormone antagonists, antimicrobial drugs
- 3.2 Routes of administration of drugs - parental preparations, oral preparations, ointments, ophthalmic preparation. Their advantages & disadvantages.
- 3.3 ADME mechanism- Various processes of Absorption of drugs and the factors affecting them. Metabolism, Distribution & Excretion of Drug in the human system
- 3.4 General mechanism of drug action

### UNIT-4 PHARMACEUTICS

- 4.1 Introduction and classification of different pharmaceutical dosage forms
- 4.2 Basic concepts and applications, composition, preparation, physicochemical consideration in manufacturing of pharmaceutical, biotech and herbal medicines

- 4.3 Quality control, storage and stability of pharmaceutical, biotech and herbal products
- 4.4 Analysis of pharmaceuticals – Analytical methods and tests for various drugs for raw materials and finished products, Packing techniques – Glass containers, plastic containers, film wrappers and bottle seals

#### **UNIT-5 INDUSTRIAL PHARMACY**

- 5.1 Manufacturing process of Oral Liquids
- 5.2 Manufacturing process of Tablets
- 5.3 Manufacturing process of Capsules
- 5.4 Manufacturing process of Injectable preparations
- 5.5 Manufacturing process of Ointments
- 5.6 Manufacturing process of Immunological products- vaccines, sera and toxoids.
- 5.7 Concept of GMP on different dosage forms.

#### **Reference Books:**

1. Pharmaceutical biotechnology by S.S. Purohitetal
2. Biopharmaceutics and Pharmacokinetics by Brahmankar
3. Introduction of Pharmacology by K D Tripathi.
4. Biopharmaceutics Biochemistry and Biotechnology by Gary Walsh, Wiley Pub.
5. Biopharmaceutics and Pharmacokinetics by G R Chatwal
6. Pharmaceutical Product development by N K Jain

