Code: PY
Pharmacy

Pharmacognosy & Phytochemistry: Sources of Crude Drugs of Natural Origin and Their Classification; Factors Affecting the Cultivation of Medicinal and Aromatic Plants; Plant Growth Regulators; Adulteration and Types of Adulterants; Methods of Evaluation of Crude Drugs.
Plant Tissue Culture: Types of Cultures, Nutritional Requirements, Growth and Their Maintenance. Applications of Plant Tissue Culture.

Pharmaceutical Chemistry
Biochemistry: Bimolecular Vitamins and Enzymes, Metabolism of Carbohydrates, Proteins, Lipids and Nucleic Acids.

Medicinal Chemistry: Introduction to Drug Design. Stereochemistry of Drug Molecules in Relation to Biological Activity. Structure, Nomenclature, Classification, Synthesis, SAR and Metabolism of the Following Category of Drugs, Which Are Official in Indian Pharmacopoeia and British Pharmacopoeia: Hypnotics and Sedatives, Neuroleptics, Antidepressants, Anxiolytics, Anticonvulsants, Local Anaesthetics; Cardiovascular Drugs: Antianginal Agents, Vasodilators, Adrenergic and Cholinergic Drugs, Cardiotonic Agents, Diuretics, Antihypertensive Drugs and Antilipemic Agents. Antihistaminics; Analgesics; NSAIDS; Hypoglycemic Agents; Anticoagulants; Antiplatelet Agents; Chemotherapeutic agents: Antibiotics, Antibacterials, Antifungal, Antiviral, Antimalarial, Anticancer and Antiamoebic Drugs; Drugs Affecting Hormonal Function.

Inorganic pharmaceuticals: Gastrointestinal Agents; Electrolytes; Haematinics; Topical Agents; Dental Products. Limit Tests for Arsenic, Iron, Lead, Chloride and Sulphate.

Pharmaceutics

Physical pharmacy: Matter and Properties of Matter; Micromeritics and Powder Rheology; Surface and Interfacial Phenomenon; Viscosity and Rheology; Dispersion Systems; Complexation; Kinetics and Drug Stability.

Pharmaceutical Microbiology and Biotechnology: Methods of Sterilization: Moist and Dry Heat, Filtration, Radiation and Gaseous; Sterility Testing; Media; Sampling; Neutralization of Various Antimicrobial Substances in Dosage Forms; Principles of Microbiological Assays.
Principles of Immunology- Immunity; Classification of Immunity; Natural and Acquired Immunity; Manufacture and Standardization of Cholera, BCG, Polio and Rabies Vaccines; Diptheria Toxoid, Tetanus Antitoxin. Monoclonal Antibodies- Preparation and Applications of antibiotics and hormones.

Biopharmaceutics & Pharmacokinetics: Passage of Drugs Across Biological Barrier; Factors Influencing Absorption: Biological, Physico-Chemical, Physiological and Pharmaceutical. Basic Principles of Pharmacokinetics; Compartment Modeling: One Compartment Model with Reference to Intravascular and Oral Drug Administration, Concept of Clearance. Non-Linear Pharmacokinetics with Reference to One Compartment Model After I.V. Drug Administration; Bioavailability and Bioequivalence.


Pathophysiology of common diseases:

Pharmaceutical Analysis and Quality Assurance: Concepts of Qualitative and Quantitative analysis;


c) Quality Assurance and Quality Control Methods. Concept of GMP, GLP and GCP.

**Forensic pharmacy:** Pharmacy Act 1948; Drugs and Cosmetics Act 1940 and Rules 1945 and Amendments Thereto; Narcotic Drugs & Psychotropic Substances Act 1985 and Rules; Drugs Price Control Order.

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