PHARMACOLOGY- Pathophysiology of common diseases: Basic Principles of Cell Injury and Adaptations, adaptations and cell death, Causes of Cellular injury, morphology of cell injury, pathogenesis

Basic Mechanisms involved in the process of inflammation and repair: Vascular and cellular events of acute inflammation, brief outline of the process of repair, chemical mediators of inflammation, inflammation, pathogenesis of chronic

Immunopathophysiology: Amyloidosis , T and B cells, MHC proteins, AIDS, antigen presenting cells, autoimmune diseases, immune tolerance, hypersensitivity reactions, pathogenesis

Pathophysiology of Common Diseases: Asthma, Wherever applicable the molecular basis should be discussed, diabetes, sexually transmitted diseases, rheumatoid arthritis, gout, urinary tract infections, ulcerative colitis, hepatic disorders, anemias, tuberculosis, peptic ulcer, congestive heart failure, neoplasia, myocardial infarction, psychosis, atherosclerosis, depression, congestive heart failure, mania, angina, epilepsy, hypertension, acute and chronic renal failure

Fundamentals of general pharmacology: Dosage forms and routes of administration, Bioavailability and bioequivalence studies, Discovery and development of new drugs, Bioassay of Drugs and Biological Standardization, Adverse Drug Reactions, Excretion of drugs, Distribution, mechanism of action, combined effect of drugs, factors modifying drug action, absorption, Metabolism, tolerance and dependence, pharmacokinetics, Pharmacogenetics, Principles of Basic and Clinical

Pharmacology of Peripheral Nervous System: Neurohumoral transmission (autonomic and somatic), Local anesthetic Agents, Parasympathomimetics, Neuromuscular blocking Agents, Parasympatholytics, Ganglion stimulants and blocking agents, Adrenergic receptor and neuron blocking agents, Sympathomimetics

Pharmacology of Cardiovascular System: Drugs used in the management of congestive cardiac failure, Drugs used in the therapy of shock, Anti-hyperlipedemic drugs, Antihypertensive drugs, including calcium channel blockers and beta adrenergic antagonists, Antiarrhythmic drugs, Anti-anginal and Vasodilator drugs

Drugs Acting on the Hemopoietic System: Blood and plasma volume expanders, Hematinics, Fibrinolytic and anti-platelet drugs, Vitamin K and hemostatic agents, Anticoagulants

Drugs acting on urinary system: Diuretics, Fluid and electrolyte balance

Autacoids: Histamine, nonsteroidal anti-inflammatory and anti-gout agents, Antihistaminic drugs, Bradykinin and Substance P and other vasoactive peptides, Angiotensin, 5-HT- its agonists and antagonists, thromboxanes and leukotrienes, Prostaglandins

Drugs Acting on the Respiratory System: Anti-tussives and expectorants, Anti-asthmatic drugs including bronchodilators, Respiratory stimulants

Drugs acting on the Gastrointestinal Tract: Antacids, digestants, enzymes and mucolytic, Anti-secretory and Anti-ulcer drugs, astringents, Laxatives and anti-diarrhoeal drugs, protectives, adsorbents, demulcents, Carminatives, Miscellaneous, Appetite Stimulants and Suppressants, Emetics and anti-emetics

Pharmacology of Endocrine System: Drugs acting on the uterus, Hypothalamic and pituitary hormones, progesterone and oral contraceptives, Thyroid hormones and anti-thyroid drugs, Estrogens, parathormone, Androgens and anabolic steroids, calcitonin and Vitamin D, ACTH and corticosteroids, Insulin, oral hypoglycemic agents and insulin analogs, glucagons, incretins

Chemotherapy: General Principles of Chemotherapy, Chemotherapy of malignancy and immunosuppressive agents Bacterial resistance, amoebiasis and other protozoal infections and Anthelmentics, Sulfonamides and cotrimoxazole, malaria, urinary tract infections and sexually transmitted diseases,Antibiotics- Penicillins, HIV and AIDS, viral diseases, Cephalosporins, Aminoglycosides, Chloramphenicol, Macrolides, fungal diseases, leprosy, Tetracyclines, Chemotherapy of tuberculosis, Quinolones, Miscellaneous antibiotics, fluoroquinolones

Principles of Toxicology: organophosphorous ,Definition of poison, Heavy metals and heavy metal antagonists, atropine poisoning,, general principles of treatment of poisoning, opioids, barbiturates

Basic Concepts of Pharmacotherapy: Drugs used during pregnancy, Clinical Pharmacokinetics and individualization of Drug therapy, Common clinical laboratory tests and their interpretation, Drug delivery systems and their Biopharmaceutic s & Therapeutic considerations, General principles of clinical toxicology, The basics of drug interactions, Drugs used during infancy and in the elderly persons (Pediatrics & Geriatrics), Drug induced diseases

Important Disorders of Organs, Systems and their Management: Cardio-vascular disorders- Hypertension, Cardiac arrhythmias, Acute myocardial infarction, Congestive heart failure, Angina

CNS Disorders: Parkinsonism, Epilepsy, Depression, Schizophrenia

Respiratory disease: Asthma

Gastrointestinal Disorders: Hepatitis, Peptic ulcer, Cirrhosis, Ulcerative colitis

Endocrine Disorders Diabetes : mellitus and Thyroid disorders

Infectious Diseases: Tuberculosis, Hematopoietic Disorders- Anemias, Urinary tract infections, Upper respiratory infections, enteric infections

Joint and Connective tissue: Disorders Rheumatic diseases, Hyperuricemia, Gout

Neoplastic Diseases: Concept of Essential Drugs and Rational Drug, Acute Leukaemias, Therapeutic Drug Monitoring, Hodgkin's disease