

PHARMACOLOGY

POST GRADUATE DEGREE STANDARD

PAPER-I

UNIT I

GENERAL PRINCIPLES OF PHARMACOLOGY:- 1. History of Pharmacology and its evolution.

2. General Introductory pharmacology - Principles of Pharmacokinetics (PCK) Principles of Pharmacodynamics (PD) Drug therapy principles in geriatric and pediatric patients. Principles of drug therapy in pregnancy and lactation.

3. General principles of Pharmacogenetics - Heritable factors influencing drugs Alterations in genetic system by drugs.

4. Fetal Therapy.

UNIT II

SYSTEMIC PHARMACOLOGY:- 1. Effect of drugs on Cardiovascular system Central and Autonomic nervous system Gastro intestinal system, Genito urinary system Musculo-skeletal system Hematopoietic system

2. Drugs influencing immune responses - immunomodulators.

3. Pharmacology of autocooids & temperature regulating systems.

4. Miscellaneous - Vitamines, Hormones as drugs, Heavy metals and Chelating agents.

UNIT III

CLINICAL PHARMACOLOGY:- 1. Drug safety and efficacy

2. Primary screening and conduct of drug trials. preclinical trials, Phase I,II, III and IV trials.

3. Monitoring of adverse drug reactions and drug interactions.

4. Drug monitoring -Therapcutic drug monitoring.

5. Rational prescribing and pharmacocconomics.

UNIT IV

EVALUATION OF DRUGS AND EXPERIMENTAL METHODS - BOTH QUALITATIVE AND QUANTITATIVE ASPECTS:-

1. Elucidation/Evaluation of mechanism of drug action on various systems lic - CNS, CVS, GIT, GUT, endocrine, Respiratory, Immune function, diuresis etc.,

2. Methods in acute and chronic toxis studies.

3. Methods in phytochemistry.

UNIT V

RECENT ADVANCES IN PHARMACOLOGY:-

PAPER-II

UNIT I

GENERAL PRINCIPLES OF PHARMACOLOGY:- 1. General Principles of Toxicology of Xcnobiotics, Environmental pollutants and Pharmacocpidemiology.

2. General Principles of Clinical Pharmacology.

3. Principles of Bioassy and Drug monitoring.

UNIT II

SYSTEMIC PHARMACOLOGY:-

1. Toxicology - Treatment of poisoning /overdose.

2. Social Pharmacology & Pharmacoeconomic

UNIT III

APPLIED PHARMACOLOGY:- 1. Pharmacology of Infectious diseases (parasitic, fungal, bacterial, viral etc.,)

2. Therapy of disease due to chemical, physical, climatic & environmental causes.

3. Therapy of dis.due to genetic & constitutional factors.

4. Drug therapy in the young and neonate, old patients.

5. Drug therapy of neuropsychiatrid syndromes.

6. Basic knowledge of anatomy, physiology, biochemistry, Microbiology and pathology, cellular and molecular biology applied to pharmacology.

UNIT IV

EVALUATION OF DRUGS AND EXPERIMENTAL METHODS - BOTH QUALITATIVE AND QUANTITATIVE ASPECTS:- 1. Biological standardisations - ID₅₀ ED₅₀ etc., in intact and isolated preparations.

2. Methods of pharmacokinetics - measurements of PL. conc. Elim t 1/2 vd, AUC, peak pl conc vs. through conc etc.,

3. Basic principles of instrumentation PH meter spectrophotometer (UV-Vis & fluorescence), Fluorimetry, Chromatography, HPLC, Electrophoresis and use of computers in pharmacology.

UNIT V

PROGRESS IN MEDICINAL CHEMISTRY CURRENT TRENDS:-