

Course Outline (Syllabus)

BPH 224 Pharmacology-I

3 credits

For Mid-Term Examination

1. **General principle:** Sources of drugs, routes of administration and pharmacogenetics.
2. **Introduction to pharmacokinetics:** Drug absorption, factors modifying drug absorption, distribution, metabolism and excretion (ADME).
3. **Introduction to pharmacodynamics:** Basic principles, mechanism of drug absorption, receptor (receptor for physiological regulatory molecules, structural and functional families, receptor as enzyme etc.) agonist, antagonist, potentiation, synergism, drug-receptor interaction, factors modifying drug action, drug tolerance, dependence etc. Basic concept of drug action, receptor, nature of receptor, drug antagonism, Relation between drug dose & clinical response. Signaling mechanism and drug action, ligand gated channels, G-proteins and second messengers.
4. **Drugs for peptic ulcer:** antacid, H₂ - receptor blockers, proton pump inhibitor, PG analogue, mucosal-protective agent, Anti Helicobacter pylori.

For Final Examination

5. **Autacoids:** Amine, lipid & peptide autacoids.
6. **Analgesic, antipyretic and antiinflammatory drugs:** Non-narcotic analgesic- salicylates, pyrazolone derivatives, para-aminophenole derivatives, propionic acid derivatives, indomethacin, sulindac, tolmetin, diclofenac; Narcotic analgesic -opium alkaloids, morphine antagonist, synthetic & semisynthetic opiate.
7. **Sedative & hypnotic drugs:** Benzodiazepine & Barbiturates.
8. **Local & General anesthetic:** History, mechanism of action, properties, Pharmacological action of local & General anesthetics.
9. **CNS stimulant drugs:** Strychnine, xanthine & methylxanthine, amphetamine, nicotine.

Recommended Books:

1. Goodman & Gillman's Pharmacological Basis of Therapeutics- Hardman, Joel G., 10th edition, Mc graw Hill Incorporated.
2. Basic and Clinical Pharmacology- Bertram G. Katzung, 9th edition, Mc Graw Hill Companies.
3. Medical Pharmacology-Andres Goth, 8th edition, Toppan Co. Ltd.
4. Pharmacology & Pharmacotherapeutics- R. S. Satosker, Paperback, 2005, Popular Prakashani Ltd. India.
5. Clinical Pharmacology- D. R. Laurence, P. N. Bennett and M. J. Brown, 9th edition, Churchill Livingstone.
6. Clinical Pharmacy and Therapeutics, Roger walker and Clive Edwards, 3rd edition, Churchill Livingstone.