

## PHARMPG - 2022

### SYLLABUS FOR M.PHARM. AND PHARM D (PB) ENTRANCE TEST

#### PHARMACEUTICAL CHEMISTRY

- Pharmacotherapeutic Agents: Structure, nomenclature, uses, mechanism of action and structure activity relationship of drugs belonging to the categories of neuroleptics, antidepressants and anxiolytics, antihypertensives, antiarrhythmics, diuretics, analgesics, anti-inflammatory antihistamines.
- Chemotherapeutic Agents: Structural formulae, classification nomenclature, uses, mechanism of action and structure-activity relationship of drugs belonging to categories of sulphonamides, anticancer drugs, antibiotics, antiamebic agents, antiviral drugs, antitubercular drugs, anthelmintics.
- Drug synthesis : Synthesis of drugs belonging to the categories of local anaesthetics, barbiturates, anticonvulsants, antihistamines, tranquilisers, synthetic hormones, diuretics, vasodilators. Anti AIDS.
- IUPAC Nomenclature, inductive effect, resonance, tautomerism, electronegativity, stereoisomerism, nucleophilic substitution, addition, elimination reactions. Chemistry of benzene and its derivatives, amines, alcohols, carboxylic acids, aldehydes and ketones and phenols.
- Principles and applications of Absorption spectroscopy, chromatography, potentiometry, conductometry refractometry and polarography. Pharmacopoeial assays. Principles and instrumentation of NMR and Mass spectroscopy, GLP, Hyphenated Methods.

#### PHARMACEUTICS

- Technology of Drug Delivery Systems : Formulation and Evaluation of parenterals, tablets, capsules, aerosols, liquid orals, ophthalmic preparations and new drug delivery systems.
- Biopharmaceutics and Clinical Pharmacy : Drug absorption, distribution, metabolism and elimination. Dissolution testing and Bio availability of drugs. Clinical Pharmacy and drug interaction.
- Microbiology : Sterilization and Sterility testing. Methods of preparation of official sera and vaccines. Serological and diagnostic tests. Principles and methods of microbiological assays of Pharmacopoeia. Applications of microorganisms in bioconversions.
- GMP and CGMP

#### PHARMACOLOGY

- Pharmacotherapeutic Agents : Uses, mechanism of action of drugs belonging to the categories of neuroleptics, antidepressants and anxiolytics, antiepileptics, antiparkinsonian, antihypertensives, antiarrhythmics, diuretics, antihistamines, H1 and H2. Drugs acting on autonomic nervous system.
- Chemotherapeutic Agents : Classification, uses, mechanism of action of drugs belonging to categories of sulphonamides, anticancer drugs, antibiotics, antiamebic agents, antiviral drugs, antitubercular drugs, anthelmintics.

#### PHARMACOGNOSY

- Chemistry, tests, uses and mode of action of cardiac glycosides, steroids, alkaloids and terpenes. Pharmacognosy of Digitalis, Cinnamon, Rauwolfia, Ergot, Opium, Clove, Belladonna, Ginseng, Taxol, Artemisine and Senna.

#### PHARMACEUTICAL BIOTECHNOLOGY

- Biochemical role of hormones, vitamins, enzymes and nucleic acids. Metabolism.
- Immobilized enzyme, molecular hybridization, basic techniques in DNA Technology. Down stream processing, Impact on health care system. PCR, Micropropagation in plants including organogenesis & embryogenesis, Transgenic plants.