

SVKM's NMIMS Global University
PhD Entrance Syllabus

Pharmaceutical Sciences Paper-II

Unit1: Medicinal Chemistry:

Physical Chemistry, Organic Chemistry, Basic Concepts, Named Organic Reactions, Reaction Mechanism, Application in Synthesis of Drugs, Pharmaceutical Chemistry including Structure, Chemistry, Synthesis, SAR and Therapeutic Value of Drugs, Pharmaceutical Analysis including Spectrometry and Electrochemical Methods of Analysis.

Unit 2: Pharmaceutics:

Physical Pharmacy, Flow of Fluids, Thermodynamics, Micromeritics, Pharmaceutical Engineering, Different Techniques Used in Pharmaceuticals, Biopharmaceutics and Pharmacokinetics, Tablet, Capsules, Semisolid Dosage Form, Solutions, Liquids and Sterile Products, NDDS.

Unit 3: Pharmacology

Human Anatomy and Physiology, detailed study of different organs, biological system and their functions, Pathophysiology, physiology and etiology of human diseases and disorders, Pharmacology of therapeutic drugs from different class like Drugs acting on CNS, CVS, ANS and Chemotherapeutic agents, Clinical Pharmacy and Therapeutics.

Unit 4: Pharmacognosy

Fundamentals of Pharmacognosy like Scope, Classification of Crude Drugs, Their Identification and Evaluation, Phytochemicals Present in Them and their Medicinal Properties. Alkaloids, Glycoside, Tannis, Terpenes and Miscellaneous Class of Drugs.

Unit 5: Miscellaneous

Biochemistry, Biological Macromolecules, Study of Biochemical Pathways, Biotechnology, Different Molecular Biology Techniques, Microbiology, Microorganisms, Sterile Techniques Pharmaceutical Management, Pharmaceutical Jurisprudence, Dispensing & Hospital Pharmacy.

REFERENCE BOOKs:

1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
2. Foye's Principles of Medicinal Chemistry.

3. Burger's Medicinal Chemistry, Vol I to IV.
4. Pharmaceutical dosage form - Parenteral medication vol- 1 & 2 by Liberman & Lachman
5. Pharmaceutical dosage form disperses system Vol-1 by Liberman & Lachman
6. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
7. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
8. Textbook of Pharmacognosy by Trease & Evans.
9. Textbook of Pharmacognosy by Tyler, Brady & Robber.
10. Pharmacognosy by Kokate, Purohit and Gokhale
11. Principles of Biochemistry by Lehninger
12. Harper's Biochemistry by Robert K. Murry, Daryl K. Granner and Victor W. Rodwell.
13. Biochemistry by Stryer