



Shri Balaji Shikshan Prasarak Mandal's

B. PHARMACY COLLEGE

Modi learning Centre, Ring Road, Ambajogai, Beed.

COURSE: MEDICINAL CHEMISTRY III - THEORY (BP601T)



CO No.	CO Statement	Bloom's Level
BP601T.1	Discuss the antibiotics, antimalarials, antitubercular, antifungals, urinary tract anti-infective agents, quinolone, antibacterials, anti-protozoals, anthelmintics, sulphonamides and sulfones and folate reductase inhibitors in relation to chemical classification.	Remember, Understand
BP601T.2	Explain life cycle of malarial parasite and of helminths and understand the biological target site in relation	Remember, Understand
BP601T.3	Explain the concept of prodrug with its biological activation in vivo for drugs from various classes.	Remember, Understand
BP601T.4	Explain the protein synthesis and cell wall synthesis of bacteria and drug acting by protein synthesis and cell wall synthesis inhibition	Remember, Understand, Apply
BP601T.5	Describe physiochemical parameters like hydrophobicity, electronic parameter and steric factors that relates with biological activity and study of QSAR model with the help of free Wilson approach and Hansch analysis, explain pharmacophore modelling and doc	Remember, Understand, Apply

COURSE: PHARMACOLOGY III - THEORY (BP602T)

CO No.	CO Statement	Bloom's Level
BP602T.1	Gain the knowledge regarding pharmacology of drugs acting on respiratory system and gastrointestinal tract as well as many other forms of medications like anti-asthmatic drugs, expectorant and antitussive, nasal decongestants, respiratory stimulants.	Remember, Understand, Apply
BP602T.2	Explain the effect of chemotherapy; their general principles and apply the knowledge to understand the effect of antibiotics: penicillin, cephalosporin, chloramphenicol, macrolides, quinolones and fluoroquinolones, tetracycline and amino glycosides.	Remember, Understand, Apply
BP602T.3	Compassion the various disease and the agent which will treat that medical condition like antitubercular agent, antileprotic agent, antifungal agent, antiviral agent, anthelmintic, antimalarial drugs, antiamoebic agents.	Remember, Understand, Apply
BP602T.4	Keep the cognition of various diseases like sexually transmitted diseases and urinary tract infections also have glimpse on chemotherapy of malignancy. Perceive the intended meaning of immunostimulants, immunosuppressant and learn about laboratory produced.	Remember, Understand, Apply
BP602T.5	Recognize the need of chronopharmacology in that rhythm and cycle along with biological clock and their significance leading to chronotherapy. Understand the principle for toxicity (genotoxicity, carcinogenicity teratogenicity, and mutagenicity), poisoning.	Remember, Understand, Apply



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COURSE: HERBAL DRUG TECHNOLOGY- THEORY (BP603T)

CO No.	CO Statement	Bloom's Level
BP603T.1	Study of herbs as raw material, processing of herbal raw material, good agricultural practices along with Indian systems of medicine and utilize the information for preparation as well as standardization of ayurvedic formulations	Remember, Understand
BP603T.2	Explain general aspects of nutraceuticals and their role in treatment of various diseases also apply the knowledge of herbal drug and herb-food interactions to facilitate improvement in health and well being.	Understand
BP603T.3	Apply the knowledge of herbs and herbal excipients systematically in formulation of herbal cosmetics, conventional herbal formulations as well as novel dosage forms for sustainable development	Apply
BP603T.4	Evaluation of herbal drugs as per WHO and ICH guidelines also gain the information regarding patenting and regulatory requirements of natural products.	Evaluate
BP603T.5	Explain the present scope and future prospects of herbal drug industry and accordingly get the information regarding good manufacturing practice of Indian systems of medicine.	Understand

COURSE: BIOPHARMACEUTICS AND PHARMACOKINETICS - THEORY (BP604T)

CO No.	CO Statement	Bloom's Level
BP604T.1	Knowing the potential relationships between plasma concentrations and therapeutic response with absorption, distribution, metabolism, excretion, bioavailability and bioequivalence.	Remember, Understand, Create
BP604T.2	Explain the processes that determine the entry of drugs into the body and its transit through absorption, distribution, metabolism and excretion	Remember, Understand, Create
BP604T.3	Explain the concept of bioavailability and bioequivalence, compartment modelling and non linear pharmacokinetics and interpret the plasma drug concentration measurement by the application of compartment model.	Remember, Understand
BP604T.4	Recognize the need of bio-pharmaceutics and pharmacokinetics in the pharmaceutical formulations	Remember, Understand
BP604T.5	Assess the critical evaluation of biopharmaceutical studies involving drug product equivalency.	Remember, Understand, Create



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COURSE: PHARMACEUTICAL BIOTECHNOLOGY- THEORY (BP605T)

CO No.	CO Statement	Bloom's Level
BP605T.1	Explain and recall the historical development in pharmaceutical biotechnology.7. Explain the different techniques used in biotechnology.	Remember, Understand, Apply
BP605T.2	Critically evaluate different methodologies of downstream processing in the purification of biotechnological products.	Remember, Apply, Analyze
BP605T.3	Demonstrate a critical awareness of recent techniques applicable to research in pharmaceutical biotechnology and their roles in effective therapeutic treatments.	Remember, Understand, Apply, Analyze
BP605T.4	Employ the knowledge in to genetic and recombination technology.	Remember, Understand, Apply
BP605T.5	Explain the purification techniques for biotechnology derived products.	Remember, Understand, Apply, Analyze

COURSE: PHARMACEUTICAL QUALITY ASSURANCE-THEORY (BP606T)

CO No.	CO Statement	Bloom's Level
BP606T.1	Importance of quality, quality management, total quality management and quality by design in pharmaceutical industry for development of quality product.	Remember, Understand, Apply
BP606T.2	Importance of organization and personnel for development of good pharmaceutical product.	Remember, Understand, Apply, Analyze
BP606T.3	Explain requirements of good manufacturing practices and good laboratory practices and explain various guidelines for GMP AND GLP.	Remember, Understand, Apply, Analyze, Evaluate
BP606T.4	Give importance of documentation in pharmaceutical industry and details about preparation and utilization of documentation.	Remember, Understand, Apply, Analyze
BP606T.5	Describe the meaning of calibration its importance in pharmaceutical industries and explain in detail validation process for manufacturing, formulation and analysis of formulation with validation protocol.	Remember, Understand, Apply



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COURSE: MEDICINAL CHEMISTRY III- PRACTICAL (BP607P)

CO No.	CO Statement	Bloom's Level
BP607P.1	Synthesize and characterize sulphanilamide, 7-hydroxy, 4-methyl coumarin, chlorobutanol, triphenyl imidazole, tolbutamide and hexamine and preparation of medicinally important compounds or intermediates by microwave irradiation technique	Analyze, Evaluate, Create
BP607P.2	Perform assay of drugs like isonicotinic acid hydrazide, chloroquine, metronidazole, dapsone, chlorpheniramine maleate and benzyl penicillin	Analyze, Evaluate, Create
BP607P.3	Drawing structures and reactions using Chem draw and determination of physicochemical properties such as molecular weight, hydrogen bond donors and acceptors for class of drugs COURSE content using drug design software.	Analyze, Evaluate, Create

COURSE: PHARMACOLOGY III - PRACTICAL (BP608P)

CO No.	CO Statement	Bloom's Level
BP608P.1	Learn, select, and apply appropriate methods and procedures for antiallergic activity, skin and eyes irritation test; know the serum biochemical estimations using semi-auto analyser.	Remember, Understand, Apply
BP608P.2	Learn, select, and apply appropriate methods and procedures for antiallergic activity, skin and eyes irritation test; know the serum biochemical estimations using semi-auto analyser.	Remember, Understand, Apply
BP608P.3	Calculate the dose of drug, pharmacokinetic parameters and LD_{50} from given data; appropriately utilize statistical mathematics to perform accurate medication calculations and for analysis of clinical experimental data.	Remember, Understand, Apply

COURSE: HERBAL DRUG TECHNOLOGY- PRACTICAL (BP609P)

CO No.	CO Statement	Bloom's Level
BP609P.1	Understand raw material as source of herbal drugs from cultivation to herbal drug product.	Remember, Understand, Create
BP609P.2	Know the WHO and ICH guidelines for evaluation of herbal drugs.	Remember, Understand, Evaluate
BP609P.3	Know the herbal cosmetics, natural sweeteners, and nutraceuticals.	Understand, Apply, Analyze, Create