



Shri Balaji Shikshan Prasarak Mandal's
B. PHARMACY COLLEGE
Modi learning Centre, Ring Road, Ambajogai, Beed.



COURSE: PHARMACEUTICAL ORGANIC CHEMISTRY III THEORY (BP401T)

CO No.	CO Statement	Bloom's Level
BP401T.1	Define and explain the different types of isomers, assign suitable configuration, draw the structure of specific isomer and explain the determination of configuration.	Remember, Understand, Analyze
BP401T.2	Explain chiral, achiral, meso compound with suitable examples and describe conformational analysis of different organic molecules.	Remember, Understand, Apply, Analyze
BP401T.3	Explain stereoselective, stereospecific reactions, chiral synthesis, resolution of racemic mixture and racemic modification.	Remember, Understand, Apply
BP401T.4	Classify heterocycles, draw the structures, give nomenclature, assign numbering, and explain preparation methods.	Remember, Understand, Apply
BP401T.5	Compare chemical reactivity, aromaticity and explain chemical reactions, medicinal uses of different organic compound and heterocycles.	Remember, Understand, Apply, Analyze

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COURSE: MEDICINAL CHEMISTRY I THEORY (BP402T)

CO No.	CO Statement	Bloom's Level
BP402T.1	Summarize the various receptors with location and response of stimulation, history and development of various classes of drugs acting on ANS and CNS	Remember, Understand, Apply
BP402T.2	Relate the pharmacological action of drug with the various physicochemical parameters like stereochemistry, SAR etc	Understand, Apply
BP402T.3	Classify metabolic reactions of the drugs, illustrate factors affecting, predict metabolic reaction of drugs and neurotransmitters.	Remember, Understand, Apply, Analyze, Evaluate
BP402T.4	Define, classify, draw structure, assign IUPAC name, describe mechanism of action, enlist marketed formulations and uses of various categories of drugs acting on ANS and CNS.	Remember, Understand, Apply
BP402T.5	Outline the synthesis of various drugs acting on ANS, CNS and neurotransmitters and relate it with etiology of allied diseases.	Remember, Understand, Apply

COURSE: PHYSICAL PHARMACEUTICS II THEORY (BP403T)

CO No.	CO Statement	Bloom's Level
BP403T.1	State and understand concept, properties and mechanisms of solubility, states of matter, surface tension and interfacial phenomenon, complexation and protein binding, buffers and isotonicity.	Remember, Understand
BP403T.2	Understand and demonstrate various physicochemical properties of drug molecules in the designing and evaluation of the dosage forms.	Remember, Understand
BP403T.3	Explain, classify and compare adsorption, surfactants, complexation, buffered isotonic solutions.	Understand, Create
BP403T.4	Apply the principles of solubility, physicochemical properties, adsorption, complexation and protein binding, buffers in pharmaceutical and biological system.	Apply
BP403T.5	Analyze and evaluate composition of substances, solubility, stability constants and adsorption constants for formulation development	Analyze, Evaluate



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COURSE: PHARMACOLOGY I – THEORY (BP404T)

CO No.	CO Statement	Bloom's Level
BP404T.1	Analyze how fundamental pharmacological properties can influence route of administration, drug action; drug efficacy and potency; drug levels in the body; potential for drug interactions; drug synergism & antagonism; drug toxicity; and the appropriate choice.	Remember, Understand, Apply, Analyze
BP404T.2	Acquire the knowledge of basic scientific concepts and principles that serve as the foundational underpinnings of the pharmacological sciences including pharmacokinetics; pharmacodynamics; drug metabolism; and adverse drug reactions.	Remember, Understand, Apply, Analyze
BP404T.3	Discuss the process by which new drugs are discovered, developed, tested and finally approved by the authorized agencies for use in the clinic.	Remember, Understand, Apply, Analyze
BP404T.4	Study the specific pharmacology of the major drugs and drug classes which acts on ANS including their indications, contraindications, clinical use, mechanisms of action, physiological effects, pharmacokinetic properties, major adverse effects and clinical	Remember, Understand, Apply, Analyze
BP404T.5	Study the specific pharmacology of the major drugs and drug classes which acts on CNS including their indications, contraindications, clinical use, mechanisms of action, physiological effects, pharmacokinetic properties, major adverse effects and clinical applications.	Remember, Understand, Apply, Analyze

COURSE: PHARMACOGNOSY AND PHYTOCHEMISTRY I THEORY (BP405T)

CO No.	CO Statement	Bloom's Level
BP405T.1	Understand the fundamentals of pharmacognosy like history, scope, development, classification, sources and quality control of crude drugs.	Understand
BP405T.2	Understand and communicate the techniques in cultivation and production of crude drugs and also communicate the value of conservation of medicinal plants to the society.	Understand
BP405T.3	Analyze the impact of plant tissue culture, edible vaccines in pharmacognosy and demonstrate the knowledge of and need for sustainable development in plant science.	Analyze
BP405T.4	Apply the knowledge of different systems of medicine to facilitate improvement in health, well-being and to assess societal, safety issues.	Apply
BP405T.5	Utilize the information regarding primary and secondary metabolites, different plant products, marine drugs systematically to design pharmaceutical formulations.	Remember, Apply



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COURSE: MEDICINAL CHEMISTRY I – PRACTICAL (BP406P)

CO No.	CO Statement	Bloom's Level
BP406P.1	Synthesize organic compound, perform assay, do calculations, set assembly, follow safety measures, monitor reaction, purify and analyse the synthesised compound.	Remember, Understand, Evaluate
BP406P.2	Explain the reaction, mechanism, applications of synthesised organic compounds, mention the role of each chemical in synthesis and explain principle of assay and partition coefficient.	Remember, Understand, Apply, Evaluate
BP406P.3	Discuss the theoretical and practical knowledge gained from synthesis, assay of organic compounds and partition coefficient.	Remember, Understand, Apply, Analyze

COURSE: PHYSICAL PHARMACEUTICS II – PRACTICAL (BP407P)

CO No.	CO Statement	Bloom's Level
BP407P.1	Communicate and demonstrate various methods of determination of viscosity, particle size and size distribution, chemical kinetics and drug stability in the designing of the dosage forms.	Remember, Understand
BP407P.2	Perform and interpret effective results of experiment with concept behind the experiment.	Apply, Analyze
BP407P.3	Select and apply appropriate data to develop new formulation for society.	Analyze, Evaluate

COURSE: PHARMACOLOGY I – PRACTICAL (BP408P)

CO No.	CO Statement	Bloom's Level
BP408P.1	Demonstrate an understanding of CPCSEA, handling techniques, routes of drug administration, blood withdrawal, serum and plasma separation, anaesthetics and euthanasia used for animal studies.	Apply, Analyze, Evaluate
BP408P.2	Perform the effect of drugs on ciliary motility of frog oesophagus, rabbit eyes, and sleeping time of mice using CD demonstrations	Apply, Analyze, Evaluate
BP408P.3	Demonstrate the study of different drugs on animals such as skeletal muscle relaxants, locomotor activity, anticonvulsant effect, stereotype and anti-catatonic activity, anxiolytic activity and local aesthetics using respective methods.	Apply, Analyze, Evaluate