



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



COURSE: PHARMACEUTICAL ORGANIC CHEMISTRY II – THEORY (BP301T)

CO No.	CO Statement	Bloom's Level
BP301T.1	Draw the structure, explain aromatic nature and the physicochemical properties of organic compounds and factors affecting on it.	Remember, Understand, Apply, Analyze
BP301T.2	Draw and explain reaction for preparation of different organic compounds with suitable example.	Remember, Understand
BP301T.3	Draw chemical reactions of organic compounds and explain the mechanism of reaction.	Remember, Understand, Apply
BP301T.4	Describe applications of organic compounds of biological and therapeutic importance.	Remember, Understand, Apply
BP301T.5	Explain chemistry of cyclic, polycyclic compounds, fats and oils.	Remember, Understand, Apply, Analyze



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COURSE: PHYSICAL PHARMACEUTICS I – THEORY (BP302T)

CO No.	CO Statement	Bloom's Level
BP302T.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
BP302T.2	Understand and demonstrate various physicochemical properties of drug molecules in the designing and evaluation of the dosage forms.	Understand
BP302T.3	Explain, classify and compare adsorption, surfactants, complexation, buffered isotonic solutions.	Evaluate, Create
BP302T.4	Apply the principles of solubility, physicochemical properties, adsorption, complexation and protein binding, buffers in pharmaceutical and biological system.	Apply, Evaluate
BP302T.5	Analyze and evaluate composition of substances, solubility, stability constants and adsorption constants for formulation development.	Analyze

COURSE: PHARMACEUTICAL MICROBIOLOGY – THEORY (BP302T)

CO No.	CO Statement	Bloom's Level
BP303T.1	Identify and control the communicable diseases, sewage and sewage disposal, food spoilage and prevention of foods from microbes.	Remember, Understand, Apply
BP303T.2	Develop a comprehensive understanding of the relevance and critical application of pharmaceutical microbiology to the pharmaceutical industry with respect to the presence and control of microbes in raw materials, products and production environments by kind.	Remember, Understand, Apply, Analyze
BP303T.3	Define and classify the historical development and scope of microbiology.	Remember, Understand, Apply
BP303T.4	Employ the knowledge to control the microbe by physical and chemical methods.	Remember, Understand, Apply, Analyze, Evaluate
BP303T.5	Describe the microbes as sources of pharmaceutical use.	Remember, Understand, Apply, Create



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COURSE: PHARMACEUTICAL ENGINEERING THEORY (BP304T)

CO No.	CO Statement	Bloom's Level
BP304T.1	Comprehend and understand the basic concepts of flow of fluids and explain mechanism of size reduction and size separation.	Remember, Understand
BP304T.2	Analyze the mechanisms and equipment used for heat transfer, evaporation and distillation.	Remember, Understand
BP304T.3	Exemplify concepts and methods of drying and mixing, understand types of dryers and mixers used in pharmaceutical industries.	Remember, Understand
BP304T.4	Utilization of knowledge of construction, working, uses, of filtration, centrifugation and crystallization.	Remember, Understand
BP304T.5	Understand the materials of pharmaceutical plant construction and various preventive methods used for corrosion control in pharmaceutical industries.	Remember, Understand

COURSE: PHARMACEUTICAL ORGANIC CHEMISTRY II – PRACTICAL (BP305P)

CO No.	CO Statement	Bloom's Level
BP305P.1	Describe principle, reaction, mechanism and role of chemicals involved in experiment.	Remember, Understand, Apply
BP305P.2	Synthesize organic compounds and apply the knowledge of physical and chemical properties of the compound for its purification.	Remember, Understand, Apply, Analyze
BP305P.3	Communicate the knowledge, analyze the fats and oils and describe the significance of various analytical constants of oil.	Remember, Understand, Apply

COURSE: PHYSICAL PHARMACEUTICS I – PRACTICAL (BP306P)

CO No.	CO Statement	Bloom's Level
BP306P.1	Perform and illustrate different methods of determination of surface tension, cmc of surfactants, partition coefficient, critical solution temperature, hlb number, pka value, stability constant and adsorption constant.	Remember, Understand
BP306P.2	Select and apply appropriate data to develop new formulation for society.	Apply, Evaluate
BP306P.3	Perform and interpret effective results of experiment with concept behind the experiment.	Apply, Analyze, Evaluate



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COURSE: PHARMACEUTICAL MICROBIOLOGY – PRACTICAL (BP307P)

CO No.	CO Statement	Bloom's Level
BP307P.1	Demonstrate proficiency and use of the following in the laboratory: streak plate isolation technique; bacterial staining techniques; wet mount etc.	Remember, Apply, Analyze
BP307P.2	Proper culture & instrument handling.	Remember, Understand, Apply, Evaluate
BP307P.3	Perform the control of microbial contamination methods as well as interpret the result for effect of chemicals on microbes.	Remember, Understand, Apply, Analyze, Evaluate

COURSE: PHARMACEUTICAL ENGINEERING –PRACTICAL (BP 308P)

CO No.	CO Statement	Bloom's Level
BP308P.1	Exemplify the basic concepts of heat transfer, steam distillation and evaporation.	Remember, Understand
BP308P.2	Analyze the mechanisms drying rate, mixing index and size reduction.	Remember, Understand, Apply
BP308P.3	Understand the mechanisms of humidification, filtration and crystallization.	Remember, Understand, Apply