S.V.L.N.S GOVT. DEGREE COLLEGE, BHEEMUNIPATNAM

DEPARTMENT OF CHEMISTRY

COURSE	COURSE OUTCOMES
SEMESTER-I (THEORY) BSC(CBZ,MPC)	Course outcomes: At the end of the course, the student will be able to; 1. Understand the basic concepts of p-block elements 2. Explainthe differencebetweensolid,liquidandgasesintermsof intermolecularinteractions. 3.Applytheconceptsofgasequations,pHandelectrolyteswhilestudyingotherchemistrycour ses.
PRACTICAL	Course outcomes: At the end of the course, the student will be able to; 1. Understand the basic concepts of qualitative analysis of inorganic mixture 2. Use glassware, equipment and chemicals and follow experimental procedures in the laboratory 3. Apply the concepts of common ion effect, solubility product and concepts related to qualitative analysis

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COURSE	COURSE OUTCOMES
SEMESTER-II (THEORY) BSC(CBZ,MPC)	Course outcomes: At the end of the course, the student will be able to; 1. Understandandexplainthedifferentialbehaviorof organiccompoundsbasedonfundamental conceptslearnt. 2. Formulatethemechanismoforganicreactionsby recallingandcorrelatingthefundamentalproperties ofthereactantsinvolved. 3. LearnandidentifymanyorganicreactionmechanismsincludingFreeRadical Substitution, Electrophilic AdditionandElectrophilicAromaticSubstitution. 4. Correlateanddescribethestereochemicalpropertiesoforganiccompoundsand reactions.
PRACTICAL	Course outcomes: At the end of the course, the student will be able to; 1. Use glassware, equipment and chemicals and follow experimental procedures in the laboratory 2. Understandandexplainthevolumetric analysisbasedonfundamental conceptslearnt in ionic equilibria 3. Learnandidentifythe concepts of a standard solutions, primary and secondary standards 4. Facilitate the learner to make solutions of various molar concentrations. This may include: The concept of the mole; Converting moles to grams; Converting grams to moles; Defining concentration; Dilution of Solutions; Making different molar concentrations.

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COURSE	COURSE OUTCOMES
SEMESTER-III (THEORY) BSC(CBZ,MPC)	Course outcomes: At the end of the course, the student will be able to; 1. Understandpreparation,propertiesandreactionsofhaloalkanes,haloarenesand oxygencontaining functionalgroups. 2. Usethesyntheticchemistrylearntinthiscoursetodofunctionalgroup transformations. 3. Toproposeplausiblemechanismsforanyrelevantreaction
PRACTICAL	Course outcomes: Onthecompletionofthecourse,thestudentwillbe abletodothefollowing: 1. how to use glassware, equipment and chemicals and follow experimental procedures in the laboratory 2. how to calculate limiting reagent, theoretical yield, and percent yield 3. how to engage in safe laboratory practices by handling laboratory glassware, equipment, and chemical reagents appropriately 4. how to dispose of chemicals in a safe and responsible manner 5. how to perform common laboratory techniques including reflux, distillation, recrystallization, vacuum filtration. 6. how to create and carry out work up and separation procedures 7. how to critically evaluate data collected to determine the identity, purity, and percent yield of products and to summarize findings in writing in a clear and concise manner

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COURSE	COURSE OUTCOMES
SEMESTER-IV (THEORY) BSC(CBZ,MPC)	After completion of these courses students should be able to; CO1. Describe the Beer-Lambert's law and its limitations and applications. CO2. Understand the basic concepts of electronic spectroscopy. CO3. Write down the basic concepts of Infrared spectroscopy and NMR spectroscopy. CO4. Understand the basic concepts and importance of colligative properties and abnormal Colligative properties. CO5. Differentiate between specific conductance and equivalent conductance CO6. Understand the concepts of Kohlrausch's law, Debye-Huckel-Onsagar's equation for strong electrolytes, transport number and its determination and conductometric titrations. CO7. Write down about single electrode potential, Reversible and irreversible cells, Nernst Equation, determination of EMF of cell and Potentiometric titrations. CO8. Describe the basic concepts in Phase rule and its application to different systems. CO9. Carry out the Conductometric titrations and determine the Critical solution temperature (CST) of Water-Phenol system
PRACTICAL	CO1. Write down about single electrode potential, Reversible and irreversible cells, Nernst Equation, determination of EMF of cell and Potentiometric titrations. CO2. Describe the basic concepts in Phase rule and its application to different systems. CO3. Carry out the Conductometric titrations and determine the Critical solution temperature (CST) of Water-Phenol system

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COURSE	COURSE OUTCOMES
SEMESTER V B.SC(CBZ,MPC) THEORY	Course outcomes: At the end of the course, the student will be able to; 1.Tolearnaboutthelawsofabsorptionoflightenergybymoleculesandthesubsequentphot och emical reactions. 2.Tounderstandtheconceptofquantumefficiencyandmechanismsofphotochemicalreac tion .
PRACTICALS	Course outcomes: At the end of the course, the student will be able to; 1. Use glassware, equipment and chemicals and follow experimental procedures in the laboratory 2. Dete rmin e meltin g and boilin g points of or ganic compoun ds 3. Understandtheapplication of concepts of different organic reactions studied in theory part of organic chemistry

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COURSE	COURSE OUTCOMES
SEMESTER VI **B.SC(CBZ,MPC)** **THEORY-7c**	After completion of these courses students should be able to; CO1. Write down about spin-spin coupling and AX, A2X systems CO2. Describe advanced concepts in NMR spectroscopy like Decoupling, NOE etc., CO3. Carry out the quantitative determination of metal ions using Beer- Lambert's law. CO4. Describe basic concepts in electronic spectroscopy CO5. Write down the basic principles and applications of EPR spectroscopy. CO6. Carry out the synthesis of Azo dye and Aspirin. CO7. Describe the basic concepts in Organic photochemistry. CO8. Gain knowledge about the various protecting groups used in in organic synthesis. CO9. Write down the mechanisms of named reactions like Mannich Reaction, Shapiro reaction, Stork-enamin Reaction, Baylis–Hillman reaction etc., CO10. Carry out the determination of Nitrogen and Halogens in a given organic compound using green protocol CO11. Carry out the Diels-Alder reaction using Green Procedure. CO12. Write down the mechanisms of named coupling reactions like Heck coupling. CO13. Describe the terminology used in Pharmaceutical chemistry CO14. Write down the nomenclature, and classification of drugs based on structures and therapeutic activity. CO15. Gain knowledge about various Chemotherapeutic drugs and Psycho therapeutic drugs. CO16. Describe about the pharmocodynamic drugs and HIV-AIDS drugs. CO17. Carry out the determination of Iron using Potassium dichromate by Potentiometric titration CO18. Demonstrate the applications of Beer-Lambert's law using

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	Spectrophotometer.

COURSE	COURSE OUTCOMES
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	Spectrophotometer.

COURSE	COURSE OUTCOMES
SEMESTER VI B.SC(CBZ,MPC) THEORY(CLUSTER)-8C1	After completion of these courses students should be able to; CO1. Write down about spin-spin coupling and AX, A2X systems CO2. Describe advanced concepts in NMR spectroscopy like Decoupling, NOE etc., CO3. Carry out the quantitative determination of metal ions using Beer-Lambert's law. CO4. Describe basic concepts in electronic spectroscopy
CLUSTER 8C2	CO1. Write down the basic principles and applications of EPR spectroscopy. CO2 Gain knowledge about the various protecting groups used in in organic synthesis. CO3. Write down the mechanisms of named reactions like Mannich Reaction, Shapiro reaction, Stork-enamin Reaction, Baylis–Hillman reaction etc.,
	CO1. Describe the terminology used in Pharmaceutical chemistry

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CLUSTER 8C3	CO2. Write down the nomenclature, and classification of drugs based on structures and therapeutic activity. CO3. Gain knowledge about various Chemotherapeutic drugs and Psycho therapeutic drugs. CO4. Describe about the pharmocodynamic drugs and HIV-AIDS drugs. CO5. Carry out the determination of Iron using Potassium dichromate by Potentiometric titration CO6. Demonstrate the applications of Beer-Lambert's law using Spectrophotometer .
PRACTICAL	CO1. Write down the basic principles and applications of EPR spectroscopy. CO2. Carry out the synthesis of Azo dye and Aspirin CO3. Carry out the determination of Nitrogen and Halogens in a given organic compound using green protocol CO4. Carry out the Diels-Alder reaction using Green Procedure. CO5. Write down the mechanisms of named coupling reactions like Heck coupling. CO6. Carry out the determination of Iron using Potassium dichromate by Potentiometric titration CO7. Demonstrate the applications of Beer-Lambert's law using Spectrophotometer.

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COURSE	COURSE OUTCOMES
SEMESTER VI **B.SC(CBZ,MPC)** **THEORY-7c**	After completion of these courses students should be able to; CO1. Describe the basic concepts of Chromatography and principles of Chromatography CO2. Write down the theory and applications of different chromatographic techniques. CO3. Gain knowledge about different types of solvent extraction and applications of solvent extraction. CO3. Write down the principles and applications of ion exchange method. CO4. Describe different types of titrations with examples
PRACTICAL	CO1. Write down the concepts of co-precipitation and post precipitation. CO2. Determine Zn and Mg using EDTA by complexometric titration.

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