

SIR C R REDDY COLLEGE

Affiliated to Adikavi Nannaya University, Rajamahendravaram



**2019-20 (EVEN)
16-11-2019**

MINUTES OF BOARD OF STUDIES MEETING

**DEPARTMENT OF CHEMISTRY
SIR C R REDDY COLLEGE ELURU -AP-
534007**

- CO1:** To understand about properties of solids and characters of solids
- CO2:** To understand about the properties of liquids and gases
- CO3:** To gain knowledge about Basic definitions and azeotropic mixtures, CST systems
- CO4:** To gain knowledge about Colloidal solutions, Emulsions and Adsorptions.
- CO5:** To gain knowledge about formation of bonds and Bonding theories. To gain knowledge about Isomerism of Carbon compounds and stereo Chemistry of carbon compounds.

Programme specific outcomes :

Recapitulation of Basics of Organic chemistry:

PSO-1 :solid state

To understand about properties of solids and characters of solids

PSO-2 :gaseous state & liquid state

To understand about the properties of liquids and gases

PSO-3 :solution

To gain knowledge about Basic definitions and azeotropic mixtures, CST systems

PSO-4 :surface chemistry:

To gain knowledge about Colloidal solutions, Emulsions and Adsorptions.

PSO-5 :Stereochemistry of carbon compounds:

To gain knowledge about formation of bonds and Bonding theories. To gain knowledge about Isomerism of Carbon compounds and stereo Chemistry of carbon compounds

Course outcomes :

At the end of the Course, the student will be able to ;

CO-1 : Understand the basic concepts of Absorption spectroscopy, electronic spectroscopy, IR Spectroscopy, H-NMR spectroscopy.

CO-2 : Understand the basic concepts of Dilute solutions and Electro chemistry

Programme specific outcomes :

PSO-1 :General features of absorption spectroscopy:

To gain knowledge about Beers Lamberts Law ,Transmittance, Absorbance, single and Double Beam spectrophotometer and applications of beers lamberts law

PSO-2 :Electronic Spectroscopy:

To gain knowledge about energy levels of molecular orbitals and types of electronic transitions and concepts of chromophores and auxochromes

PSO-3 : IR Spectroscopy

To gain knowledge about Modes of vibrations in di atomic and poly atomic molecules and characteristics of absorption bands of different functional groups.

PSO-4 : Proton Magnetic resonance spectroscopy:

To gain knowledge about Principles of NMR, chemical shift, Spin-spin coupling and Applications of NMR.

PSO-5 : Dilute solutions :

Colligative Properties, Raoult's Law, Experimental determination methods of RLVP,

elevation of boiling point ,depression in freezing point. Osmotic pressure

PSO-6 : Electrochemistry-I

To gain knowledge about Kohlrausch Law, Arrhenius theory, Ostwalds dilution law, Debye-Huckel-on sagars equation, Definition of Transport number and Determination of Hittorfs method.

PSO-7 : Electrochemistry-II

To gain knowledge about , Nernst equation, SHE, Calomel electrode, Applications of EMF Measurements

PSO-8 : Phase rule:

To gain knowledge about one component system, two component system, freezing mixtures

Course Outcomes:

At the end of the course, the students will be able to;

CO-1 : Understand the basic concepts of environmental chemistry, scope and importance of environment in now a days .

CO-2 : Understand the basic concepts of air pollution-sources of air pollution -controlling methods of air pollution.

CO-3 : Understand the basic concepts of water quality and criteria for finding of water quality-methods to convert temporary hard water into soft water, methods to convert permanent hard water into soft water.

CO-4 : Understand the basic concepts of toxic chemicals in the environment –effects of toxic chemicals.

CO-5 : Understand the basic concepts of Eco system functions and types of Eco system.

Programme specific Outcomes:

PSO-1 : INTRODUCTION-CONCEPT OF ENVIRONMENT CHEMISTRY:

To gain knowledge about scope and importance of environment in now a days

PSO-2 : AIR POLLUTION:

To gain knowledge about air pollution-sources of air pollution –controlling methods of air pollution.

PSO-3 : WATER POLLUTION:

To gain knowledge about water quality and criteria for finding of water quality-methods to convert temporary hard water into soft water, methods to convert permanent hard water into soft water.

PSO-4 : CHEMICAL TOXICOLOGY:

To gain knowledge about toxic chemicals in the environment –effects of toxic chemicals.

PSO-5 : ECO SYSTEM,SOLID WASTE MANAGEMENT& DISASTER MANAGEMENT:

To gain knowledge about functions and types of Eco system, solid waste management, Disaster management.

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Course Outcomes:

At the end of the course, the students will be able to;

CO-1 : Understand the basic concepts of various industrial applications, compositions and uses of coal tar in metallurgy.

CO-2 : Understand the basic concepts of types of petroleum products and refining techniques.

CO-3 : Understand the basic concepts of LPC, CNG, LNG biogas fuels derived from biomass

CO-4 : Understand the basic concepts of solid and semi solid lubricants, viscosity index ,cloud point, pour point and their determinations.

CO-5 : Understand the basic concepts of battery components and their rolls, characteristics of batteries.

Programme specific Outcomes:

PSO' -1 :Review of energy sources(renewable and non-renewable):

To gain knowledge about the basic concepts of various industrial applications, composition and uses of coal tar in metallurgy.

PSO' -2 :Petroleum and petro chemical industry:

To gain knowledge about Understand the basic concepts of types of petroleum products and refining techniques

PSO' -3 :Fractional distillation, Petroleum and Non-Petroleum Fuels:

To gain knowledge about the LPC,CNG, LNG biogas fuels derived from biomass

PSO' -4 :Lubricants:

To gain knowledge about the solid and semi solid lubricants, viscosity index ,cloud point, pour point and their determinations.

PSO' -5 :Batteries:

To gain knowledge about the battery components and their rolls, characteristics of batteries

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Course Outcomes:

At the end of the course, the students will be able to;

CO-1 : Understand the basic concepts of Electronic configuration, atomic size , ionisation enthalpy ,diagonal relationship

CO-2 : Understand the basic concepts of composition and properties of glasses and manufacture of cement.

CO-3 : Understand the basic concepts of super phosphate of lime, compound and mixed fertilizers

CO-4 : Understand the basic concepts of polymer application, industrial applications and preparation, uses of PVC, nylon

CO-5 : Understand the basic concepts of composition of different types of alloys ,stainless steels, tool steel uses. Rocket

Programme specific Outcomes:

PSO-1 : Recapitulation of s- and p-Block Elements:

To gain knowledge on Electronic configuration, atomic size, ionisation enthalpy ,diagonal relationship

PSO-2 : Silicate industries:

To gain knowledge about the composition and properties of glasses and manufacture of cement.

PSO -3 :Fertilizers:

To gain knowledge on of composition of different types of alloys ,stainless steels, tool steel uses. rocket

PSO' -4 :Surface Coatings:

To gain knowledge on of polymer application, industrial applications and preparation, uses of PVC, nylon

PSO' -5 : Alloys:

To gain knowledge on composition and properties of glasses and manufacture of copellents.

Course Outcomes:

At the end of the course, the students will be able to;

CO-1 :Understand the basic concepts of constituents of soaps and paints and analysis of soaps and paints

CO-2 :Understand the basic concepts of constituents oils and fertilizers and analysis of oils and fertilizers.

CO-3 :Understand the basic concepts of mixture of gases present in fuel gases and coal gas and their analysis

CO-4 :Understand the basic concepts of different separation techniques of solvent extraction

CO-5 :Understand the basic concepts of separation techniques of column and chromatography ,Thin layer chromatography, And HPLC ,Applications of these techniques in different industries.

Programme specific Outcomes:

PSO-1 :Analysis of soaps :

To gain knowledge about the constituents of soaps and paints and analysis of soaps and paints

PSO- 2 :Analysis of oils :

To gain knowledge about the constituents oils and fertilizers and analysis of oils and fertilizers.

PSO- 3 :Analysis of Fertilizers:

To gain knowledge about the mixture of gases present in fuel gases and coal gas and their analysis

PSO-4 :Gas analysis :

To gain knowledge about the different separation techniques of solvent extraction

PSO-5 :Separation techniques:

To gain knowledge about separation techniques of column and chromatography, Thin layer chromatography, And HPLC. Applications of these techniques in different industries

