Dr.V.S.KRISHNA GOVT. DEGREE COLLEGE
(An Autonomous Institution Affiliated to Andhra University)
District Resource Centre & Center for Research Studies
Maddilapalem, VISAKHAPATNAM 530 013, Andhra Pradesh

COURSE OUTCOMES

NAME OF THE PROGRAMME: II YEAR B.SC.-PHYSICS (IV SEMESTER)

NAME OF THE COURSE: CC-7: THERMAL PHYSICS

CO	CO Description	K Level
CO 1	To understand the First Law of Thermodynamics and apply it to various Thermodynamic processes	Level 2 and 3
CO 2	To understand the Second Law of Thermodynamics and its various applications	Level 2
CO 3	To understand the concept of Entropy and get acquainted with Maxwell's Thermodynamic potentials	Level 2 and 3
CO 4	To work out how to derive Maxwell's Thermodynamic relations and understand Maxwell's Kinetic Theory of Gasses and apply it to Molecular Collisions	Level 4
CO 5	To understand the behaviour of Real Gases	Level 2

NAME OF THE COURSE: CC-8: QUANTUM MECHANICS AND APPLICATIONS

CO	CO Description	K Level
CO 1	To understand the basic aspects of Time Dependent Schrodinger Equation, Time Independent Schrodinger Equation, and the physical significance of wave function	Level 2
CO 2	To solve Time Independent Schrodinger Equation for one dimensional Potential functions in the Quantum Mechanics	Level 4
CO 3	To comprehend the wavefunctions of the electron in Hydrogen atom	Level 4
CO 4	To understand the stark & the Zeeman effects	Level 2
CO 5	To extend the vector Atom model and the formalism of Schrodinger to Many Electron atoms	Level 4

NAME OF THE COURSE: CC-9: SOLID STATE PHYSICS

CO	CO Description	K Level
CO 1	To understand the geometrical as well as the Vectorial descriptions of Crystal structure and also about the methods of determination of crystal structure	Level 2
CO 2	To comprehend the fundamentals of the Lattice Dynamics and apply to understand the variation of specific Heats of solids with Temperature	Level 2 and 4
CO 3	To understand the theoretical and experimental aspects of the Magnetic and the Dielectric properties of matter	Level 2
CO 4	To understand the Band theory of solids to distinguish between conductors, Semiconductors, and Insulators	Level 2 and 3
CO 5	To understand the basic aspects of the Ferroelectricity & the Superconductivity	Level 2

NAME OF THE COURSE: CC-10: ESSENTIALS OF ANALOG & DIGITAL SYSTEMS AND APPLICATIONS

CO	CO Description	K Level
CO 1	To understand the two modes of conduction in Intrinsic & Extrinsic semiconductors To understand the Energy level diagrams of both types of semiconductors To apply the above to understand the working of P-N junction Diode	Level 2 and 3
CO 2	To understand the basic aspects of the characteristics of various configurations of the Bi polar Junction Transistors and apply these to understand and work out the analysis of various configurations of single as well as multi stage Amplifiers and also that of RC coupled Amplifiers	Level 2 and 3
CO 3	To comprehend the working mechanism for the sustained oscillations in RC phase Shift, Hartley's and Colpitts' oscillators and also to get acquainted with some Basic aspects of IC s	Level 2 and 3
CO 4	To get acquainted with the fundamental aspects of Digital circuits & the basic Aspects of Boolean Algebra and also to know about the simplification of digital Circuits using Boolean algebra	Level 2,3 and 4
CO 5	To know about some basic aspects of Arithmetic circuits Timers and Shift Registers	Level 2

NAME OF THE COURSE: CC-11: ESSENTIALS OF STATISTICAL MECHANICS

SYSTEMS AND APPLICATIONS

On successful completion of this course, the student will be able to:

CO	CO Description	K Level
CO 1	To understand the basic concepts of Classical as well as Quantum statistics and also apply them to understand about three kinds of Distributions based on Distinguishability & Indistinguishability of the identical particles	Level 2
CO 2	To comprehend the experimental aspects of Black body radiation and also will be able to understand the theoretical aspects of Black body radiation using not only the Classical but also the Quantum theory of radiation	Level 2 and 3
CO 3	To understand to derive Maxwell's Electromagnetic equations and also understand the introduction of Displacement Current. To understand about the Boundary conditions at interfaces , Poynting theorm and various densities	Level 2
CO 4	To understand the experimental and theoretical aspects of the Polarization Phenomenon of the Light and also about the phenomenon of optical Rotation exhibited by a Plane polarized light	Level 2 and 3
CO 5	To comprehend the fundamental aspects of propagation of EM waves in Bounded media and the basic principles involved in the propagation of a Light signal through an Optical Fiber	Level 4