Government City College (A)
Hyderabad-500002
(Affiliated to Osmania University)
Accredited with B^{++} Grade by NAAC

Department of Physics

COURSE OUTCOMES:

Course 1: Mechanics & Oscillations

CO1: Understand concept of vectors and applications of vector algebra.
CO2: Explain the mechanics of particles as well as rigid bodies
CO3: Gain the knowledge of central forces and applications.
CO4: Use the concepts of harmonic motion both in theory and in laboratory to handle the experiments.
CO5: Gain the knowledge of Special theory of relativity and its applications

Course 2: Thermal Physics

CO1: Know the behaviour of gas molecules using appropriate mathematical equations.
CO2: Learn why efficiency of the heat engine is less than 100% and its applications with necessary equations
CO3: Know the basic principle behind the working of the pressure cooker.
CO4: Know the measurement of the temperature of a body without touching the body. The laws related to radiation
CO5: Gain the knowledge in Low temperature Physics and applications.

Course 3: Electromagnetic Theory

CO1: Determine and describe static electric, magnetic fields and potentials
CO2: Use Maxwell equations in analysing electromagnetic field due to time varying charge and current distribution
CO3: Describe the nature of electromagnetic waves and its importance in communication technology.
CO4: Gain knowledge of various experimental techniques to measure voltages and currents in electrical networks
CO5: Applying Network theorems in complex networking of circuits

Course 4 : Waves & Optics

CO1: Differentiate the types of waves, energy transport through and their applications.
CO2: To understand the applications of interference, diffraction and polarization invarious fields.
CO3: Scientific applications of light concepts in various fields.
CO4: Gain knowledge in operating optical instruments.
CO5: Gain knowledge in optically active substances and their applications using mathematical techniques.

Course 5: Modern Physics

CO1: Understand the development of theories of atomic models.
CO2: Compare and the significance of Modern Physics and Classical Physics
CO3: Apply methods and equations in the numerical involving atomic spectro photoelectric effect, quantum theories, crystal lattices,

nuclear energies which are the fundamentals of latest theories in nanoscience and nanotechnology.

CO4: Communicate scientific ideas and physical concepts in daily applications.

CO5: Gain knowledge in synthesizing the new materials(Ferrites).

Course 6 : Electronics

CO1: Understand the concepts of Band theory of solids and concepts of N-type and P-type Semiconductors, the working principle and applications of PN Junction diode and Zener Diode

CO2: Study the various configurations, V-I characteristics and Applications of Bipolar Junction Transistor (BJT), the concept of feedback and designing and working of various types of Oscillators,

CO3: Understand the construction, characteristics and applications of various types of special type of Electronic devices like photodiode, Shockley diode, solar cell, opto couplers, FET, UJT and SCR.

CO4: Understand the concepts of various number systems and their conversions, which required for computers, various types of digital gates and the concept of designing of various types of combinational circuits.

CO5: Gain knowledge in fabrication of new printed circuit boards (PCB) for various applications