VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

Department of Humanities & Sciences (IT&CSE)

I Year I Semester – R18

Course outcomes

Mathematics-I/ A21002	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Write the matrix representation of system of linear equations and identify the consistency of the system of equations.
CO2	Find the Eigen values and Eigen vectors of the matrix and discuss the nature of the quadratic form.
CO3	Analyze the convergence of sequence and series.
CO4	Discuss the applications of mean value theorems to the mathematical problems, Evaluation of improper integrals using Beta and Gamma functions.
CO5	Examine the extrema of functions of two variables with/ without constraints.

Applied Physics / A21003	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Identify various optical phenomena of light.
CO2	Discuss the basic principles of quantum mechanics.
CO3	Classify solids based on the band theory.
CO4	Elucidate the characteristics of semiconductors and semiconductor devices.
CO5	Explain the working principle of lasers and optical fibers.

Applied Physics Lab / A21082	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Apply optical phenomena to characterize optical sources and components.
CO2	Determine the energy gap of a semiconductor diode and time constant of RC circuit
CO3	Describe the electrical characteristics of PN junction diode, photodiode, LED and solar cell.
CO4	Demonstrate the resonance in mechanical and electrical waves.
CO5	Identify the magnetic Induction along the axis of current carrying coil.

Basic Electrical Engineering / A21201	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Understand the fundamentals of basic circuit components and their characteristics.
CO2	Analyze basic electrical circuits with A.C excitation.
CO3	Understand the concepts of magnetic circuits and transformers.
CO4	Acquire the basic concepts of electrical motors.
CO5	Understand the concept of A.C generator and low voltage electrical installations.

Basic Electrical Engineering Lab / A21281	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Get an exposure to basic electrical laws.
CO2	Understand the response of different types of electrical circuits to different excitations.
CO3	Understand the measurement, calculation and relation between the basic electrical parameters.
CO4	Understand the performance characteristics of D.C electrical machines.
CO5	Understand the performance characteristics of A.C electrical machines.

Engineering Graphics & Modelling / A21301	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Understand the concepts of engineering drawing of planes, solids and the CAD drawing software.
CO2	Applying the principles of engineering graphics while drawing the engineering components.
CO3	Analyze the sectional views for their configurations.
CO4	Evaluate the surfaces of solids developed for further processing in the engineering applications.

English Language Communication Skills Lab / A21081	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Reproduce speech sounds and improve fluency in language.
CO2	Understand syllables and consonant clusters for appropriate pronunciation.
CO3	Exhibit effective professional skills with rhetoric eloquence.
CO4	Deliver enthusiastic and well-practiced presentation.
CO5	Learn Task-Based Language Learning (TBLL) through various language learning activities effectively.

Programming for Problem Solving-I / A21501	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Design Algorithms and Flowcharts for real world applications using ‘C’.
CO2	Know the usage of various operators in Program development.
CO3	Design programs involving decision and iteration structures.
CO4	Apply the concepts code reusability using Functions.
CO5	Analyze various searching and sorting techniques using Arrays.

Programming for Problem Solving Lab-I / A21581	
After completing this course the student must demonstrate the knowledge and ability to	
CO1	Apply the specification of syntax rules for numerical constants and variables, data types.
CO2	Know the Usage of various operators and other C constructs.
CO3	Design programs on decision and control constructs.
CO4	Develop programs on code reusability using functions.
CO5	Implement various searching and sorting techniques using arrays.