Program Name:	I B.TECH -EEE	Class / Sem I-II
Regulation	R20	

CO Statement Mathematics-III
Calculate directional derivative and gradient.
Explain the concept of greens, strokes and gauss divergence theorem.
Apply the Laplace transform for solving ordinary differential equations.
Understand the concept of Fourier series expansion.
Solve the sine and cosine transforms.
Discuss partial differential equations of both first and second order.

CO Statement Applied Physics
Explain the principles of wave optics.
Interpret the development and applications of Laser light and its uses in optical fiber communication.
Apply the role of quantum mechanics, free electron theory, band theory of solids and its applications on physical system.
Classify the properties of dielectric and magnetic materials for various applications.
Make use of semiconductors and Superconductor devices.
Identify the applications to solve practical problems related to materials used for engineering.

CO Statement Data Structures Through C
Summarize the properties, interfaces and behaviors of basic abstract data type.
Describe different Sorting, Searching techniques and understand various file organizations.
Explain the basic data structures such as Arrays,Linkef Lists.
Use Stacks, Queues in writing programs.
Demonstrate different methods for traversing trees.
Solve problem involving Graphs

CO Statement- Electrical Circuit Analysis -I
Understand Various electrical networks in presence of active and passive elements.
Solve Electrical networks with network topology concepts.
Analyze Any magnetic circuit with various dot conventions.
Analyze Any R, L, C network with sinusoidal excitation.
Understand Analyze Any R, L, network with variation of any one of the parameters i.e R, L, C and f.
Solve Electrical networks by using principles of network theorems.

CO Statement – Basic Civil and Mechanical Engineering
To Understand the basic definitions of Force, stress, stain, torsion
Apply shear force and bending moment diagram principle for Simply supported and cantilever beam
Construction and working principle of strain gauges and types
To Analyze the characteristics of common building materials Brick, Timber, glass and steel.
Compare the working characteristics of IC engines
To differentiate the boiler mountings and accessories

CO Statement Applied Physics Lab
Operate optical instruments like microscope and spectrometer and to determine thickness of a hair/paper with the concept of interference
Determine of radius of curvature of a given plano convex lens by Newton's rings and estimate the wavelength of different colors using diffraction grating
Determine of dispersive power of the prism. To determine the wavelength of Laser light using diffraction grating.
Calculate the resistance of the given semiconductor with varying temperature and calculate the band gap of a given semiconductor. To draw the V-I characteristics of Zener diode
Study the variation of B versus H by magnetizing the magnetic material (B-H curve) and to plot the intensity of the magnetic field of circular coil carrying current with distance
Determine the dielectric constant using charging and discharging method and to determine the resonant frequency and Quality factor of LCR Circuit in series and parallel.

CO Statement – Basic Civil and Mechanical Engineering Lab
Solve to arrive at finding constant speed and variable speed on IC engines and interpret their performance.
Estimate energy distribution by conducting heat balance test on IC engines
Explain procedure for standardization of experiments
Determine flow discharge measuring device used in pipes channels and tanks
Determine fluid and flow properties
Solve for drag coefficients

CO Statement – Data Structures through C Lab
Explain different Sorting and Searching Algorithms
Describe various types of linked lists and their applications
Use of stack, Queue and their applications
Classify simple applications using various data structures
Show the basic operations on trees
Determine minimum spanning tree by using Graphs

CO Statement – COI
Understand historical background of the constitution making and its importance for building democratic India.
Understand the functioning of three wings of the government ie., executive, legislative and judiciary
Understand the value of the fundamental rights and duties for becoming good citizen of India.
Analyze the decentralization of power between central, state and local self-government.
Apply the knowledge in strengthening of the constitutional institutions like CAG, Election Commission and UPSC for sustaining democracy
Understand Electoral Process, Emergency provisions and Amendment procedure.