Department of Electronics and Telecommunication Engineering

B.E. 5th Sem

Course: Microcontroller

At the end of Microcontroller course the student will be able:

- **CO 1:** To attain the knowledge of Microprocessor 8085
- CO 2: To understand the Interfacing of various peripheral devices with Microprocessor 8085
- CO 3: To attain the knowledge of Microcontroller 8051
- CO 4: To understand assembly language & C Programming for Microcontrollers
- CO 5: To understand the Interfacing of various peripheral devices with Microcontroller 8051
- CO 6: To gain knowledge of advance Microcontrollers

Course: Control System

Course Code: (5ETC02)

At the end of Control System course the student will be able:

- **CO1:** To understand mathematical models of electrical, mechanical and electromechanical systems.
- **CO2:** To determine transfer functions from block diagrams and signal flow graph.
- CO3: To evaluate transient response and steady state response parameters.
- CO4: To analyze stability of the LTI system using Routh criterion and root locus
- **CO5:** To analyze stability of the LTI system using bode plot and Nyquist criterion
- **CO6:** To create the state model and evaluate response of the system using state variable method.

Course Code: (5ETC01)

Course: Digital Signal Processing

Course Code: (5ETC03)

At the end of Digital Signal Processing course the student will be able: **CO 1:** To manipulate the discrete time signals and identify the type system.

- **CO 2:** To compute the Z-transform of a sequence, identify its region of convergence and compute the inverse Z-transform.
- **CO 3:** To evaluate the Fourier transform of a signal.
- **CO 4:** To design FIR and IIR filters.
- **CO 5:** To understand the concepts of Multi rate Digital Signal Processing and need of Filter banks.
- **CO 6:** To understand the application of Digital Signal Processing.

Course: Power Electronics (PE-I)

Course Code: (5ETC04)

At the end of Power Electronics course the student will be able:

- **CO 1:** To analyze the characteristics of various power electronics devices.
- **CO 2:** To understand SCR firing circuits, commutation techniques.
- **CO 3:** To analyze and design controlled rectifiers and dual converters
- **CO 4:** To analyze and design DC to DC, AC to AC converters and DC to AC inverters,
- **CO 5:** To design and develop power electronic circuits for various applications.
- **CO 6:** To know various applications of power converters in DC drives.

B.E. 6th Sem

Course: Communication Network

Course Code: (6ETC01)

At the end of Communication Network course the student will be able:

- **CO 1:** To identify different types of network devices and their functions within a network.
- **CO 2:** To understand the basic functions of data logical link control and media access control and protocol used in this layers.
- **CO 3:** To distinguish between the layers of the OSI and TCP/IP model.
- **CO 4:** To analyze, specify and design routing strategies for an IP based networking Infrastructure.
- **CO 5:** To understand the concept of reliable and unreliable transfer protocol of data and how TCP and UDP implement these concepts.
- **CO 6:** To understand various application layer protocols.

Course: Computer Architecture

Course Code: (6ETC02)

At the end of Computer Architecture course the student will be able:

- **CO 1:** To learn how computers work
- **CO 2:** To analyze the performance of computers
- **CO 3:** To perform floating point arithmetic operations and design ALU as per the requirement
- **CO 4:** To know how computers are designed & built
- **CO 5:** To understand and design different types of memory systems
- **CO 6:** To understand issues affecting recent processors

Course: Satellite Communication

At the end of Satellite Communication course the student will be able:

- **CO 1:** To visualize the architecture of satellite systems as a means of high speed, high range communication system.
- CO 2: To state various aspects related to satellite systems such as orbital equations, subsystems in a satellite
- To solve numerical problems related to orbital motion and assign of link budget for the CO 3: given parameters and conditions.
- **CO 4:** To learn advanced techniques and regulatory aspects of satellite communication
- CO 5: To understand role of satellite in various applications.
- CO 6: To understand VSAT and GPS.

Course Code: (6ETC04) Course: Introduction to Python Programming (PE-II)

At the end of Introduction to Python Programming course the student will be able:

- CO 1: To interpret the fundamental Python syntax and semantics
- **CO 2:** To be fluent in the use of Python control flow statements
- CO 3: To perform basic CURD operations on Mongo DB using Python.
- **CO 4**: To determine the methods to create and manipulate Python programs by utilizing the data structures like lists, tuples and sets.
- CO 5: To identify the commonly used operations involving file systems and regular expressions.
- **CO 6:** To learn and use operators.

Course: Engineering Economics

At the end of Consumer Electronics course the student will be able:

- **CO1:** To learn basics of Engineering Economics.
- **CO2:** To understand and compute the production cost.
- **CO3:** To study different cash flow methods.
- **CO4**: To evaluate Engineering alternatives.
- **CO5**: To understand depreciation analysis.
- **CO6:** To understand Indian Banking System.

Course Code: (6ETC05)