

Electronics and Telecommunication Engineering
Course Outcomes of All Courses of B.E. Fifth Semester

Subject	CO No.	CO Statements	Blooms Level
5ETC01 Microcontroller	5ETC01.1	Understand the architecture of 8085/8051 and advanced RISC processors	Understanding (L2)
	5ETC01.2	Analyze the assembly language programming algorithm using Instructions set and addressing modes	Analyzing (L4)
	5ETC01.3	Develop a skill to write application-oriented algorithms	Applying (L3)
	5ETC01.4	Apply the concepts of microcontroller for interfacing of peripheral devices	Applying (L3)
5ETC02 Control System	5ETC02.1	Develop mathematical models of electrical, mechanical and electromechanical systems.	Applying (L3)
	5ETC02.2	Build transfer functions using block diagrams reduction and signal flow graph.	Applying (L3)
	5ETC02.3	Analyze stability of the LTI system using different techniques.	Analysing (L4)
	5ETC02.4	Solve state space models and its response using state variable method	Applying (L3)
5ETC03 Digital Signal Processing	5ETC03.1	Apply the fundamental concepts of discrete-time signals and systems to perform signal operations and convolution	Applying (L3)
	5ETC03.2	Analyze Z-transform properties and utilize them for system characterization and signal processing applications.	Analyzing (L4)
	5ETC03.3	Implement DFT and FFT techniques for spectral analysis and circular convolution in digital signal processing.	Applying (L3)
	5ETC03.4	Design FIR and IIR digital filters and examine the fundamentals of multirate digital signal processing.	Analyzing (L4)
5ETC04 Power Electronics (PE-I)	5ETC04.1	Demonstrate the characteristics of SCR and working of firing circuits.	Understanding (L2)
	5ETC04.2	Summarised Triac /Diac Power devices like Transistor, MOSFET and IGBT and force commutation techniques	Understanding (L2)
	5ETC04.3	Identify the AC to DC Phase control rectifiers and dual converters.	Applying (L3)
	5ETC04.4	Identify DC to AC and DC to DC converters.	Applying (L3)
	5ETC04.5	Examine the principle of Cyclo-converter and DC/universal motor Control	Analyzing (L4)

5ETC05 Fiber Optics Communication (PE-II)	5ETC05.1	Illustrate the principles fiber-optic communication, the components and Losses and dispersion in fiber.	Undersatnding(L2)
	5ETC05.2	Explain the transmission characteristics of optical fiber	Undersatnding(L2)
	5ETC05.3	Express the properties of the optical components in sources.	Analyzing (L4)
	5ETC05.4	Explain operation of lasers, LEDs, and detectors in fiber	Undersatnding(L2)
	5ETC05.5	Describe the aspects of optical fiber coupler and switches	Undersatnding(L2)
	5ETC05.6	Elaborate WDM and DWDM systems.	Applying(L3)
5ETC06 Microcontroller Lab	5ETC06.1	Desrcibe the internal organization of Microprocessor and Microcontroller	Understanding (L2)
	5ETC06.2	Develop programing skill for applications of Microprocessor and Microcontroller	Applying (L3)
	5ETC06.3	Experiment with interfacing of IO devices with Microcontroller	Applying (L3)
	5ETC06.4	Apply the concepts of microcontroller for interfacing of peripheral devices	Applying (L3)
5ETC07 Digital Signal Processing Lab	5ETC07.1	Apply the basic concepts of signal and its sampling for digital signal processing	Applying (L3),
	5ETC07.2	Apply DFT and IDFT for the analysis of digital signals and systems.	Applying (L3),
	5ETC07.3	Design FIR, IIR filters for digital signal processing.	Analyzing (L4)
	5ETC07.4	Understand the basics of Multirate Digital Signal Processing.	Understanding (L2)
5ETC08 Power Electronics Lab	5ET08.1	Understand the various power electronics devices and their characteristics.	Understanding (L2)
	5ET08.2	Analyse the Triggering of SCR techniques.	Analyzing (L4)
	5ET08.3	Illlustrate commutation and DC to AC inverter techniques.	Applying (L3)
	5ET08.4	Understand the operation of AC to DC converters.	Applying (L3)
	5ET08.5	Know operation of various DC and AC motors and their applications.	Applying (L3)
5ETC09 Electronic Lab based on Instrumentation	5ETC09.1	Select temperature transducers for different ranges of temperature measurement	Applying (L3)
	5ETC09.2	Utilize displacement transducers in various applications	Applying (L3)
	5ETC09.3	Utilize piezoelectric transducers for pressure measurement	Applying (L3)
	5ETC09.4	Utilize strain guage for strain measurement	Applying (L3)


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