Part-I

Class: T.Y.B.Tech (Autonomous)

Course: EED301 Control System Engineering

Course Outcomes

	By the end of the course the student will be able to:
CO1	Able to Determine the mathematical modeling of physical systems and evaluate their transfer function of using block diagram and /or signal-flow graph techniques
CO2	Able to Interpret different physical and mechanical systems in terms of electrical system to construct equivalent electrical models for analysis. system (Understand)
CO3	Able to Employ the time-domain response of first and second order systems for various standard test signals and investigate their stability using time- domain techniques ions
CO4	Able to Analyze the system response and stability in time domain (Analyse)
CO5	Able to Formulate different types of analysis in frequency domain to explain the nature of stability of the system
CO6	Able to Design different types of controllers and compensator to ascertain the required dynamic response from the system

CO-PO-PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 10	PSO1	PSO2	PSO3
CO1	2						2		
CO2		2	2				2		
CO3		2	2		2				2
CO4	2	2			2				
CO5		2		2				2	2
CO6	1								1
Average	2	2	2	2	2		2	2	2
Mapping Strength	2	2	2	2	2		2	2	2

Class: T.Y.B.Tech (Autonomous)

Course: EED302 Microprocessor 8085

Course Outcomes

	By the end of the course the student will be able to:
CO1	Explain the functionality of each architectural block of 8085 microprocessor
CO2	Describe the assembly language instructions of 8085 microprocessor
CO3	Develop assembly language programs for 8085 microprocessor
CO4	Interface semiconductor memory to 8085 microprocessor
CO5	Interface various peripherals to 8085 microprocessor
CO6	Design an 8085 microprocessor based system using ADC, DAC, Stepper motor, DC Motor & Relay using assembly language

CO-PO/PSO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3												3		
CO2	3												3		
CO3		3											2	2	
CO4			2											2	2
CO5			2											2	2
CO6			2											2	2
Avg	3	3	2										2.66	2	2

Class: T.Y.B.Tech (Autonomous)

Course: EED303 Power Electronics

Course Outcomes

CO1	Demonstrate the behavior of different switching devices (SCR, MOSFET, IGBT, GTO and TRIAC.) for construction, working, VI characteristics and switching characteristics. (Understand)
CO2	Demonstrate the operation of single phase controlled and uncontrolled rectifiers and analyze its characteristics and performance parameters with R and RL load (Analyze)
CO3	Demonstrate the operation of Three phase controlled and uncontrolled rectifiers and analyze its characteristics and performance parameters with R and RL load (Analyze)
CO4	Describe basic operation of chopper with control methods (Understand)
CO5	Demonstrate the operation of single phase inverter with different types and three phase inverter with different operating mode.. (Analyze)
CO6	Illustrate the functioning of AC voltage controllers and cycloconverters(Analyze)

CO-PO-PSO Mapping

CO\PO	**PO1**	**PO2**	**PO3**	**PO4**	**PO9**	**PO12**	**PSO1**	**PSO2**
CO1	3	2			1	1	1	
CO2	1	3	3	2		1		1
CO3	1	3	3	2		1		1
CO4		3	2			1		1
CO5		3		2	1	1		1
CO6	3					1		1
Average	2	2.4	2.6	2	1	1	1	1

Class: TY (Autonomous)

Name of the Course: EED304 Power Systems-I

Course Outcomes

	By the end of the course the student will be able to:
CO1	Describe layout and operation of thermal and hydroelectric power plant & Evaluate plant economics
CO2	Calculate the transmission line constants of solid & composite conductors using the concept of GMD
CO3	Classify types of conductors and insulators also compare them based on the design specification & illustrate the effects caused by voltage & current
CO4	Calculate the sending end and receiving end parameters of different (short, medium & long) types of transmission lines.
CO5	Discuss the classification, requirements, design considerations, and calculation methods for AC and DC distribution systems

CO-PO/PSO Mapping

CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PSO1**	**PSO2**
CO1	3	2				2	
CO2	3	2				2	
CO3	3	2				2	
CO4	3						1
CO5	3					2	
Average	**3**	**2**				2	1
Mapping Strength							

Part-II

Class: T.Y.B.Tech

Course: EED353 High Voltage Engineering

Course Outcomes

Sr. No.	By the end of the course the student will be able to:
CO1	Summarize the concept of electric field stresses and applications of insulating materials for equipment like transformers, rotating machines, circuit breakers, cables, power capacitors & other equipment.
CO2	Examine the effect of high voltage on breakdown strength of gaseous, solids and liquid insulating materials.
CO3	Select appropriate insulation co-ordination levels based on highest rating of electrical equipment in substation.
CO4	Analyze methods for generation and measurement of High Voltages and Currents (both ac and dc)
CO5	Explain non-destructive testing techniques in high voltage engineering based on IEC & IS.

CO-PO Mapping

POs /	(Domain Dependent)					(Domain Independent)						
POs / COs	1	2	3	4	5	6	7	8	9	10	11	12
CO1	3											1
CO2	3			1								1
CO3	3	1							1			1
CO4	3			1					1			1
CO 5	3											1
CO	**3**	**1**		**1**					**1**			**1**

CO-PSO Mapping:

CO No.	PSO I	PSO II	PSO III
CO1	3	-	1
CO2	3	-	1
CO3	3	1	1
CO4	3	1	1
CO5	3	-	1

Class: T.Y. (Autonomous)

Course: EED 352 Electrical Drives

Course Outcomes

	By the end of the course the student will be able to:
CO1	Analyze the dynamics of Electrical Drives system.
CO2	Use various control techniques for controlling the operation of Electrical Drive
CO3	Demonstrate the function of various DC Drive
CO4	Demonstrate the function of various Induction motor Drive
CO5	Demonstrate the function of various Synchronous motor Drive
CO6	Efficiently use various AC and DC drive.

CO-PO/PSO Mapping

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										
CO2	2											
CO3	2											
CO4	2											
CO5	2											
CO6	2			3								
Average	**2**	**2**		3								

Class: T.Y B.tech (Autonomous)

Course Name: EED351 Power System-II

Course Outcome

	By the end of the course the student will be able to:
CO1	Develop the model of a given power system network using per unit reactance diagram.
CO2	Analyze the Load flow problem using iterative methods like Gauss Siedel, Newton Raphson, Fast decoupled Methods.
CO3	Evaluate the Symmetrical and unsymmetrical faults & infer the performance of power system
CO4	Develop and solve the positive, negative and zero sequence network for a given system
CO5	Identify the electrical power quality events and its mitigation techniques in power system.

CO-PO Mapping:

Course Code	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
CO1	3	2		2								
CO2	2	2		2								
CO3	2	2		2								
CO4	2			2								
CO5	3											
Average	**2.4**	**2**		2								

CO-PSO Mapping:

CO No.	**PSO I**	**PSO II**	**PSO III**
CO1	2		
CO2	2		
CO3	1		
CO4		1	
CO5	2		
Average	1.7	1	

CLASS: B.Tech EE

COURSE: EED 402 Advance Control Systems

Course Outcome:

	By the end of the course the student will be able to:
CO1	Able to **Represent** a physical system in state space format. (Remember)
CO2	Able to **Analyse** various no-linear ties in physical system. (Understand)
CO3	Able to **Design** compensators using classical techniques (Apply)
CO4	Able to **Acquire** knowledge of state space and state feedback in modern control systems, pole placement, design of state observers and output feedback controllers (Analyse)
CO5	Able to **Demonstrate** non-linear system behaviour by phase plane and describing function methods (Analyse).
CO6	Able to **Design** and analyse Digital feedback control systems using a range of techniques**;** (Create)

CO-PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2			1			2			2		
CO2	1	2	2				2			1	2	2
CO3		2	2	1	2				2		2	2
CO4	2	2	1		2					2	2	1
CO5	1	2		2				2	2	1	2	
CO6	1	1	1			1		1	1	1	1	1
Average	1.6	1.2	2	1	1.3	1						2.66

CO-PSO Mapping

CO	PSO1	PSO2	PSO3
CO1	1		
CO2	1	1	1
CO3	1	2	1
CO4	1	2	
CO5	1		2
CO6	1	2	2
Average	1	1.75	1.5