



Course Outcomes &CO-PO-PSO Mapping and Justification

Subject	ANALOG & DIGITAL ELECTRONICS	15CS32
COURSE OUTCOMES:		
CO No.	On completion of this course, students will be able to:	Cognitive Level
15CS32.1	Understand the concepts of JFETs, MOSFETs, BJT and op-amps.	L2
15CS32.2	Analyze Combinational Logic circuits, Simplification of Algebraic Equations using Karnaugh Maps and Quine McClusky Techniques.	L3
15CS32.3	Design Digital multiplexers, Adders and Subtractors, Binary Comparators, Latches and Master-Slave Flip-Flops.	L3
15CS32.4	Analyze Synchronous and Asynchronous Sequential circuits	L4
15CS32.5	Understand registers and Counters, A/D and D/A converters.	L2

CO-PO-PSO MAPPING

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
15CS32.1	2	1	2	-	-	-	-	-	-	-	-	2	-	-	2
15CS32.2	3	2	2	-	-	-	-	-	-	-	-	2	-	-	2
15CS32.3	3	1	3	-	-	-	-	-	-	-	-	2	-	-	2
15CS32.4	1	2	2	-	-	-	-	-	-	-	-	2	-	-	2
15CS32.5	1	1	1	-	-	-	-	-	-	-	-	2	-	-	2
Avg. Mapping	2.0	1.4	2.0	-	2.0	-	-	2.0							

CO-PO-PSO JUSTIFICATION

CO No.	PO/PSO	CL	Justification
15CS32.1	PO1	2	Moderately mapped as students can able to gain the knowledge on Photodiodes, Light Emitting Diodes and photo couplers ,BJT Biasing.
	PO2	1	Slightly mapped as students will be able to analyze the Operational Amplifier Application Circuits.
	PO3	2	Moderately mapped as students will be able to design the Operational Amplifier Application Circuits.
	PO12	2	Moderately mapped as students will be able to apply the concept of Oscillator, voltage regulators real world problems.
	PSO3	2	Moderately mapped as students will be able to apply the concept of Diodes, oscillators and regulators in embedded systems.
15CS32.2	PO1	3	Strongly mapped as students can able to gain the knowledge on logic design and Basic Mathematics knowledge such as Boolean algebra, the characteristics equation for sequential circuits using flip flop Boolean equations for SOP and POS, entered variable Mapping and Q-M method.
	PO2	2	Moderately mapped as students can able to analyze a given problem statement for Kmaps and Quine Mcluskey to simplify and design logic circuits.
	PO3	2	Moderately mapped as students can able to design Boolean equations for SOP and POS expressions , Entered variable Mapping and Q-M method.
	PO12	2	Moderately mapped as students can able to apply the concepts of Kmaps in digital computers.
	PSO3	2	Moderately mapped as students can able to analyze the fundamentals of SOP and POS for designing logic circuits in digital computers.
15CS32.3	PO1	3	Strongly mapped as students need the knowledge of combinational circuits such as multiplexers, adders ,subtractors and flipflops in design of digital circuits
	PO2	1	Slightly mapped as students able to analyze a given problem statement for combinational circuit using Boolean algebra and Kmaps as a tool to simplify the logic circuits.
	PO3	3	Strongly mapped as students able to design a given problem statement for combinational circuit using Boolean algebra and Kmaps as a tool.
	PO12	2	Moderately mapped as students can able to analyze the concepts learnt of combinational circuit using HDL in continuing professional development and new developments.
	PSO3	2	Moderately mapped as students can able to analyze the fundamentals combinational circuit in HDL for writing the programs to build basic application.
15CS32.4	PO1	1	Slightly mapped as students need the knowledge of sequential circuits to apply in digital computers.
	PO2	2	Moderately mapped as students able to analyze a given problem statement for sequential circuit using Boolean algebra and Kmaps as a tool.
	PO3	2	Moderately mapped as students able to design a given problem statement for sequential circuit using Boolean algebra and Kmaps.

	PO12	2	Moderately mapped as students can able to analyze the concepts learnt of sequential circuit using HDL in continuing professional development and new developments.
	PSO3	2	Moderately mapped as students can able to analyze the fundamentals of sequential circuit in HDL for writing the programs to build basic application.
15CS32.5	PO1	1	Slightly mapped as students need the knowledge of Counters & Registers to apply in digital computers.
	PO2	1	Slightly mapped as students able to analyze a given problem statement for Counters & Registers using Flip flops as a tool.
	PO3	1	Slightly mapped as students able to design a given counter, register using Flipflops.
	PO12	2	Moderately mapped as students can able to analyze the concepts learnt of Counters & Registers using HDL in continuing professional development and new developments.
	PSO3	2	Moderately mapped as students can able to analyze the fundamentals of sequential circuit in HDL for writing the programs to build basic application.

Prepared by

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