

Dr. D. Y. Patil Unitech Society's

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## Dr. D. Y. Patil Institute of Technology

## **Department of Electrical Engineering**

#### Activity: "Innovative Teaching Learning Pedagogy"

Date & Day: 08/04/2025, Tuesday

Activity Name: Circuit Solving (Active Learning)

Subject: Network Analysis

Venue: Class Room

Activity conducted by: Dr. S.D. Chavan

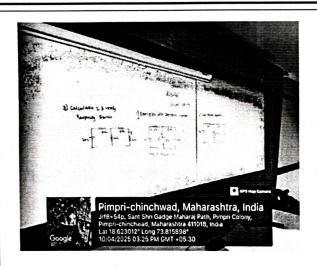
#### **Objectives:**

- Apply fundamental electrical engineering concepts to analyze electrical networks.
- Develop the ability to identify, formulate, and solve basic to moderately complex electrical circuits using techniques such as KCL, KVL, Thevenin's and Superposition theorems.
- Enhance skills in designing and verifying solutions to electrical circuits through systematic approaches and proper documentation.
- Reinforce the importance of accuracy, logical reasoning, and ethical practices in solving and documenting circuit analysis tasks.
- Effectively contribute to team efforts in identifying and evaluating diverse solutions for circuit analysis challenges.

#### **Photographs:**

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#### **Outcome:**

#### At the end of this activity students will be able to

- Apply fundamental laws (KCL, KVL) and network theorems to analyze electrical circuits accurately.
- Identify, analyze, and solve circuit-related problems by choosing appropriate analytical methods
- Develop and validate circuit solutions using theoretical approaches and proper documentation.
- Recognize the importance of precision, responsibility, and ethical considerations in presenting circuit analysis solutions.
- Communicate and collaborate effectively in teams while solving circuit problems.

#### Mapping of Pedagogy with POs and PSOs:

P01	PO2	P03	PO4	P05	P06	P07	P08	P09	PO10	Po11	PO12	PSO1	PSO2	PSO3
3	3	-	-	-	1	_ 5	-	3	2	-	3	3	2	-

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### Mapping of POs and PSOs with Justification:

POs and PSOs Mapped	Justification							
PO1: Engineering	Students apply core electrical engineering principles and laws							
Knowledge	(Ohm's law, KVL, KCL) to systematically solve complex circuit							
	problems, demonstrating their grasp of fundamental concepts.							
PO2 – Problem	Problems require identification of known and unknown parameters,							
Analysis	decomposition into solvable parts, and the selection of an							
	appropriate analysis method, thereby enhancing analytical skills.							
PO9 – Individual	Working in groups fosters collaborative problem-solving, role							
and Team Work	distribution, and peer learning, simulating real engineering							
	teamwork scenarios.							
PO10 -	Students explain their approach, present solutions, and justify their							
Communication	choice of methods to peers and the instructor, developing technical							
	communication skills.							
PO12 – Life-long	Exposure to multiple problem-solving approaches and tools builds							
Learning	adaptability, enabling students to continue learning new analysis							
	techniques in their professional careers.							
PSO1	The activity directly involves solving electrical circuits using							
	theoretical methods, helping students apply technical and logical							
	reasoning in analyzing circuits.							
PSO2	Through circuit problem-solving and simulation, students develop							
	foundational skills that support future innovative and sustainable							
	electrical system designs.							

Course Coordinator

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