

LESSON PLAN

SUB:- *CIRCUIT & SIMULATION LAB*

BRANCH:- ELECTRICAL ENGG.

SEMESTER:3rd

NAME OF FACULTY: - ASHWINI KUMAR SAHU

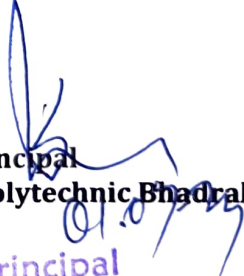


**GOVERNMENT POLYTECHNIC,
BHADRAK**

SESSION:2024-25


HOD Electrical
HOD ELECTRICAL
G.P. BHADRAK


Academic Co-ordinator
Academic Co-ordinator



Principal
Govt. Polytechnic Bhadrak
Principal
Govt. Polytechnic
Bhadrak

DISCIPLINE ELECTRICAL	SEMESTER 3 rd	NAME OF THE TEACHING FACULTY ASHWINI KUMAR SAHU (Sr. Lect. in Elect. Engg.)
SUBJECT CIRCUITS SIMULATION LAB	NO. OF DAYS/WEEK CLASS ALLOTTED – 90 (6P/week)	SEMESTER FROM DATE 01.07.2024 to 08.11.2024
WEEK	CLASS DAY	PRACTICAL TOPICS
1 st	01	Measurement of equivalent resistance in series and parallel circuit
	02	Measurement of equivalent resistance in series and parallel circuit
	03	Measurement of equivalent resistance in series and parallel circuit
	04	Measurement of equivalent resistance in series and parallel circuit
2 nd	01	Measurement of power and power factor using series R-L-C Load.
	02	Measurement of power and power factor using series R-L-C Load.
	03	Measurement of power and power factor using series R-L-C Load.
	04	Measurement of power and power factor using series R-L-C Load.
	01	Verification of KCL and KVL
3 rd	02	Verification of KCL and KVL
	03	Verification of KCL and KVL
	04	Verification of KCL and KVL
	01	Verification of Super position theorem
4 th	02	Verification of Super position theorem
	03	Verification of Super position theorem
	04	Verification of Super position theorem
5 TH	01	Verification of Thevenin's Theorem

6 TH	02	Verification of Thevenin's Theorem
	03	Verification of Thevenin's Theorem
	04	Verification of Thevenin's Theorem
	01	Verification of Norton's Theorem
7 TH	02	Verification of Norton's Theorem
	03	Verification of Norton's Theorem
	04	Verification of Norton's Theorem
	01	Verification of Maximum power transfer Theorem
8 TH	02	Verification of Maximum power transfer Theorem
	03	Verification of Maximum power transfer Theorem
	04	Verification of Maximum power transfer Theorem
	01	Determine resonant frequency of series R-L-C circuit
9 TH	02	Determine resonant frequency of series R-L-C circuit
	03	Determine resonant frequency of series R-L-C circuit
	04	Determine resonant frequency of series R-L-C circuit
	01	Study of Low pass filter & determination of cut-off frequency
10 TH	02	Study of Low pass filter & determination of cut-off frequency
	03	Study of Low pass filter & determination of cut-off frequency
	04	Study of Low pass filter & determination of cut-off frequency
	01	Study of High pass filter & determination of cut-off frequency
	02	Study of High pass filter & determination of cut-off frequency
	03	Study of High pass filter & determination of cut-off frequency
	04	Study of High pass filter & determination of cut-off frequency
		Study of High pass filter & determination of cut-off frequency

01	Analyze the charging and discharging of an R-C & R-L circuit with oscilloscope and Compute the time constant from the tabulated data and determine the rise time graphically
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01	Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. Superposition theorem
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14 TH	01	Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. Series Resonant Circuit
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15 TH	01	Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. Transient Response in R-L-C series circuit
	02	Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. Transient Response in R-L-C series circuit
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