

Discipline:- Electrical Engineering	Semester:- 3RD	Name of the teaching faculty:- B. SUBHALAXMI PANI
Subject:- Circuit and Simulation Lab	No. of days/ per week class allotted:-6	Semester from:-15-09-2022 TO 22-01-2023
Week	Class day	Theory
1 <sup>st</sup>	1st ,2nd,3rd	1. Measurement of equivalent resistance in series and parallel circuit
	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	1. Measurement of equivalent resistance in series and parallel circuit
2 <sup>nd</sup>	1st,2nd,3rd	2. Measurement of power and power factor using series R-L-C Load.
	4th,5th,6th	2. Measurement of power and power factor using series R-L-C Load
3rd	1st,2nd,3rd	3. Verification of KCL and KVL.
	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	3. Verification of KCL and KVL.
4th	1st,2nd,3rd	4. Verification of Super position theorem
	4th,5th,6th	4. Verification of Super position theorem
5th	1st,2nd,3rd	4. Verification of Super position theorem
	4th,5th,6th	5. Verification of Thevenin's Theorem
6th	1st,2nd,3rd	5. Verification of Thevenin's Theorem
	4th,5th,6th	6. Verification of Norton's Theorem
7th	1st,2nd,3rd	6. Verification of Norton's Theorem
	4th,5th,6th	6. Verification of Norton's Theorem
8th	1st,2nd,3rd	7. Verification of Maximum power transfer Theorem
	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	7. Verification of Maximum power transfer Theorem
9th	1st,2nd,3rd	8. Determine resonant frequency of series R-L-C circuit.
	4th,5th,6th	8. Determine resonant frequency of series R-L-C circuit
10th	1st,2nd,3rd	9. Study of Low pass filter & determination of cut-off frequency
	4th,5th,6th	9. Study of Low pass filter & determination of cut-off frequency
11th	1st,2nd,3rd	10. Study of High pass filter & determination of cut-off frequency
	4th,5th,6th	10. Study of High pass filter & determination of cut-off frequency
12th	1st,2nd,3rd	11. 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.

	4th,5th,6th	11. 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.
13th	1 <sup>st</sup> ,2 <sup>nd</sup> ,3 <sup>rd</sup>	11. 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.
	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	12. Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. i. Superposition theorem ii. Series Resonant Circuit iii. Transient Response in R-L-C series circuit
14th	1 <sup>st</sup> ,2 <sup>nd</sup> ,3 <sup>rd</sup>	12. Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. i. Superposition theorem ii. Series Resonant Circuit iii. Transient Response in R-L-C series circuit
	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	12. Construct the following circuits using P-Spice/MATLAB software and compare the measurements and waveforms. i. Superposition theorem ii. Series Resonant Circuit iii. Transient Response in R-L-C series circuit
15th	1 <sup>st</sup> ,2 <sup>nd</sup> ,3 <sup>rd</sup>	REVISION
	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	REVISION

  
Teaching Faculty

  
H.O.D E.E

Academic Coordinator

  
26/9/20

PRINCIPAL  
GOVT. POLYTECHNIC, DHENKANAL