KIIT POLYTECHNIC, BHUBANESWAR

LESSON PLAN

Session (2022 -2023)

Discipline: Electrical	**Semester**: 3rd ,Winter-2022	**Name of the faculty:** Sunil Kumar Bhatta **Email Id:** sunilbhattafel@kp.kiit.ac.in
Subject: Circuit & Simulation Lab	**No. of Days/week:** 02 (2 periods / Day)	**Start Date:** 14/09/2022 **End Date:** 21/01/2023
Experiments will be performed in small groups of 5 to 6 students.		

Week	Class Day	Practical Topics
1st	1st	• Introduction to Circuit Theory Lab (Equipments, Rules & Safety) • Measurement of equivalent resistance in series and parallel circuit.
	2nd	• Record Checking & Viva
2nd	1st	• Verification of KCL and KVL.
	2nd	• Record Checking & Viva
3rd	1st	• Verification of Super position theorem.
	2nd	• Record Checking & Viva
4th	1st	• Measurement of power and power factor using series R-L-C Load.
	2nd	• Record Checking & Viva
5th	1st	• Verification of Thevenin's Theorem.
	2nd	• Record Checking & Viva
6th	1st	• Verification of Maximum power transfer Theorem.
	2nd	• Record Checking & Viva
7th	1st	• Determine resonant frequency of series R-L-C circuit.
	2nd	• Record Checking & Viva
8th	1st	• Study of Low pass filter & determination of cut-off frequency.

	2nd	• Record Checking & Viva
9th	1st	• Verification of Norton's Theorem.
	2nd	• Record Checking & Viva
10th	1st	• Study of High pass filter & determination of cut-off frequency.
	2nd	• Record Checking & Viva
11th	1st	• 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.
	2nd	• Record Checking & Viva
12th	1st	• 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
	2nd	• Record Checking & Viva
13th	1st	• Repeat Class for experiment 1, 2, 3 & 4.
	2nd	• Repeat Class for experiment 5, 6, 7 & 8.
14th	1st	• Repeat Class for experiment 9, 10, 11 & 12.
	2nd	• Practice Test