MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

B. Tech II Year I Semester – R 20

20EEE202 ELECTRICAL CIRCUITS AND SIMULATION LABORATORY

LIST OF EXPERIMENTS

S. NO	NAME OF THE EXPERIMENTS	EQUIPMENT DETAILS	IMAGES
1	Verification of Thevenin's & Norton's Theorems and their validation using PSPICE	Resistors – As per Circuit Diagram Variable Resistor – 1 No. Regulated Power Supply – 1 No. MC Voltmeter – 1 No. MC Ammeter – 2 No.	

2	Verification of Superposition & Maximum Power Transfer Theorems and their validation using PSPICE	Resistors – As per Circuit Diagram Variable Resistor – 1 No. Regulated Power Supply – 1 No. MC Voltmeter – 1 No. MC Ammeter – 1 No.	
3	Verification of Compensation Theorem and its validation using PSPICE	Resistors – As per Circuit Diagram Regulated Power Supply – 1 No. MC Voltmeter – 1 No. MC Ammeter – 1 No.	

4	Verification of Reciprocity & Millmann's Theorems and their validation using PSPICE	Resistors – As per Circuit Diagram Regulated Power Supply – 2 No. MC Voltmeter – 1 No. MC Ammeter – 1 No.	
5	Transient analysis of R-L & R-C series circuits and their validation using PSPICE	Function Generator – 1 No. R-L & R-C Series Circuits Trainer Kit Digital Storage Oscilloscope – 1 No.	

6	Series and parallel resonance in R-L-C circuits	Function Generator – 1 No. Series and Parallel Resonance Trainer Kit	
7	Determination of self-inductance, mutual inductance and coefficient of coupling	MI Voltmeter – 1 No. MI Ammeter – 1 No. LPF Wattmeter – 1 No. Single Phase Auto-transformer – 1 No. Single Phase Transformer – 1 No.	

8	Determination of Z-parameter and Y-parameters	Resistors – As per Circuit Diagram Regulated Power Supply – 1 No. MC Voltmeter – 1 No. MC Ammeter – 2 No.	
9	Determination of Transmission parameters and Hybrid parameters	Resistors – As per Circuit Diagram Regulated Power Supply – 1 No. MC Voltmeter – 1 No. MC Ammeter – 2 No.	

10	Measurement of active power for Star and Delta connected balanced loads	Three Phase Auto-transformer – 1 No. UPF Wattmeter – 1 No. MI Voltmeter – 1 No. MI Ammeter – 1 No. Three Phase Load – 1 No.	
11	Measurement of reactive power for Star and Delta connected balanced loads	Three Phase Auto-transformer – 1 No. UPF Wattmeter – 1 No. MI Voltmeter – 1 No. MI Ammeter – 1 No. Three Phase Inductive Load – 1 No.	

12	Measurement of three-phase power by Two-Wattmeter method for unbalanced loads	Three Phase Auto-transformer – 1 No. UPF Wattmeter – 2 No. MI Voltmeter – 1 No. MI Ammeter – 1 No. Three Phase Load – 1 No.