DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ELECTRICAL SIMULATION LAB

S.No.	Type of the Software	Name of the Software	No. of Users	Total cost
1.	Licensed	MATLAB R2016a	36	11,13,500
2.	Licensed	Or CAD Simulation software	5	1,41,750
3.	Open Source Software	Turbo C/C++ 4.0	Unlimited	-

Details of Licensed Software

Name of the softwares	Description	Number Of Users	Cost of Software Amount (Rs)
Matlab R2016a	ML MATLAB 9.0	**36**	4,47,091.20
	Neural Network Toolbox 9.0	5	51,695.00
	Control System Toolbox 10.0	5	51,695.00
	Fuzzy logic Toolbox 2.2.23	5	51,695.00
	Simulink 8.7	15	1,40,970.00
	Simscape 4.0	5	51,695.00
	Simscape Power System 6.5	5	1,29,225.00
	Including taxes		1,89,433.57
	Total Cost		**11,13,500.00**
Or CAD Simulation software	Or CAD Capture CIS, PSPICE A/D, Advanced Analysis and SLPS Option (Version 16.3)	**5**	1,35,000.00
	Including taxes		6,750.00
	Total Cost		**1,41,750.00**

S.No	Name of Equipment/Software	Unit Price	Quantity	Cost
1	Personel Computers -Intel Core I5 - 6500 3.2G 6M 2133 4C CPU - 6MB Cache - Intel H110 Chipset Mother Board -8GB DDR 4 RAM -1TB7200 SATA HDD - Integrated 10/100/1000Gigabit Nic Card - HP 18.5" LED Monitor - HPUSB Keyboard - HPUSB Optical Mouse.	38,250/-	64	24,48,000/-
2	Software - ML MATLAB 9.0	12,419/-	36	5,38,744/-
3	Neural Network Tool Box 9.0	10,339/-	5	62,292/-
4	Control System Tool Box 10.0	10,339/-	5	62,292/-
5	Fuzzy Logic Tool Box 2.2.23	10,339/-	5	62,292/-
6	Simulink 8.7	9398/-	15	1,69,868/-
7	Simscape 4.0	10,339/-	5	62,292/-
8	Simscape Power systems 6.5	25,845/-	5	1,55,716/-
9	ORCAD Simulation software ORCAD Caoture CIS, Pspice A/D, Advanced analysis and SLPS option (Version 16.3).5 user	1,35,000	5 (User)	1,41,750
10	EATON 9145 6.0 KVA UPS	52,380/-	02	1,09,999/-
11	Amaraja 12V- 42 AH SMF Battery	2380/-	40	99,999/-
Total Cost				**39,13,244/-**

LIST OF EXPERIMENTS

S. No.	List of Experiments
1	Verification of Kirchhoff's current law and voltage law digital simulation.
2	Verification of mesh analysis digital simulation.
3	Verification of nodal analysis digital simulation.
4	Determination of average value, rms value, form factor, peak factor of sinusoidal wave, square wave digital simulation.
5	Verification of super position theorem using digital simulation.
6	Verification of reciprocity theorem using digital simulation.
7	Verification of maximum power transfer theorem using digital simulation
8	Verification of Thevenin's theorem using digital simulation
9	Verification of Norton's theorem using digital simulation
10	Verification of compensation theorem using digital simulation

11	Verification of Milliman's theorem using digital simulation
12	Verification of series resonance using digital simulation
13	Verification of parallel resonance using digital simulation
14	Verification of self inductance and mutual inductance by using hard ware
15	Generation of various signals and sequences (Periodic and Aperiodic), such as unit Impulse, Step, Square, Saw tooth, Triangular, Sinusoidal, Ramp, Sinc. using digital simulation
16	Operations on signals and sequences such as Addition, Multiplication, Scaling, Shifting, Folding, Computation of Energy, and Average Power using digital simulation

Lab In-charge   HOD