



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned				
		L	T	P	L	T	P	Total	
ESL21	Basic Electrical Technology Lab	--	--	2	--	--	1	1	
		Examination Scheme							Total
		ISE		ESE		Total			
				Practical	Oral				
		40	--	20	60				

Pre-requisite Course Codes		
Course Outcomes	CO1	Compute electrical parameters for the given circuit using network theorem.
	CO2	Verify the resonance phenomenon for a given RLC circuit.
	CO3	Compare single phase and three phase circuit for various terminology.
	CO4	Identify different parts of given ac and dc machines and implement circuit to control speed of motors in clockwise and anticlockwise direction.
	CO5	Implement any application using electronic components.

Exp. No.	Experiment Details	Ref.	Marks
1	Verification of Kirchoff's law	1,2,3	5
2	Verification of superposition theorem	1,2,3	5
3	Verification of maximum power transfer theorem.	1,2,3	5
4	Obtain bandwidth of the given RLC circuit.	1,2,3	5
5	Verify the relationship between line voltage/ phase voltage and line current/ phase circuit in three phase circuit	2	5
6	Obtain equivalent circuit of transformer using OC and SC test	1,4	5
7	List different parts from cut section of DC motor and three phase induction motor and control the speed of both in clockwise and anticlockwise direction.	4	5
8	Implement +15V/1A power supply.	5, 6	5
Total Marks			40

References:

- [1] M. B. Patil, V. Ramanarayanan, V. T. Ranganathan, "Simulation of Power Electronics Circuits", Narosa publication
- [2] B.L. Theraja "Electrical Technology" Vol-I and II, S. Chand Publications, 23rd ed. 2003.
- [3] Shaum series
- [4] Sailendra Nath Bhadra, "Electric Machinery Experiment laboratory practices and simulation study", Narosa
- [5] David Bell, "Electronic Devices and Circuits", Oxford University Press
- [6] OSCAD by IITB