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
ELL31	Analog Electronics Lab-I	--	--	2	--	--	1	1
		Examination Scheme						
		ISE			ESE			Total
					Practical		Oral	
		40			10		10	60

Pre-requisite Course Codes		EL31 (Analog Electronics - I)
After successful completion of the course, student will be able to		
Course Outcomes	CO1	Implement the given circuit on breadboard and test it with measuring instrument
	CO2	Obtain characteristics of PN Junction diode, zener diode, BJT and FET to find the various parameters
	CO3	Demonstrate applications of PN junction diode
	CO4	Obtain performance parameters like bandwidth, current gain, voltage gain, input resistance and output resistance of BJT amplifier
	CO5	Follow the procedure for installation and make use of TCAD tool
	CO6	Record the observations of given experiment and arrive at valid conclusions to correlate with theory

Exp. No.	Experiment Details	Ref.	Marks
1	To plot forward and reverse characteristics of semiconductor diode.	1,2	5
2	To plot characteristics of zener diode and observe zener as voltage regulator	1	5
3	To implement clipper and clamper circuits	1	5
4	To implement halfwave and fullwave rectifier circuits	1	5
5	To plot input-output characteristics and calculate hybrid parameters of BJT.	2	5
6	To observe frequency response of BJT amplifier	2	5
7	To plot output and transfer characteristics of FET and calculate transconductance and drain resistance.	1,2	5
8	To design and simulate PN junction diode using Visual TCAD		5
		Total Marks	**40**

References:

[1] RL Boylestad and Lous Nashelsky, "Electronic Devices and Circuits" Pentice Hall, second Edition

[2] Mahesh B. Patil, "Basic Electronic Devices and Circuits," First Edition, PHI

[3] http://www.i-vis.co.jp/pdf/cogenda/Quick_Start_Guide.pdf