

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING****Course Code / Name : U15EE309 /Introduction to Electrical and Electronics circuits****Class (Year / Programme / Department / Section): II/BE/CSE/A&B****LESSON PLAN**

<b>UNIT -1 (CIRCUIT ANALYSIS TECHNIQUES)</b>				
<b>Session No</b>	<b>Topic</b>	<b>Duration in Minutes</b>	<b>Teaching Aid</b>	<b>Book Referred</b>
1	Kirchoff's current and voltage laws	45	BB	R2
2	series and parallel connection of independent sources	45	BB	R2
3	R, L and C	45	BB	R2
4	Network Theorems	45	BB	R2
5	Thevenin	45	BB	R2
6	Superposition	45	BB	R2
7	Maximum power transfer and duality	45	BB	R2
8	Star-delta conversion.	45	BB	R2
9	Norton	45	BB	R2
<b>UNIT -2 (TRANSIENT RESONANCE IN RLC CIRCUITS)</b>				
1	Basic RL, RC and RLC circuits and their responses to	45	BB	R2
2	sinusoidal inputs	45	BB	R2
3	frequency response	45	BB	R2
4	Parallel	45	BB	R2
5	series resonances	45	BB	R2
6	Q factor	45	BB	R2
7	single tuned	45	BB	R2
8	double tuned circuits.	45	BB	R2
9	Q factor	45	BB	R2
<b>UNIT -3 (SEMICONDUCTOR DIODES)</b>				
1	Review of intrinsic	45	BB	R1
2	Review of extrinsic semiconductors	45	BB	R1
3	Theory of PN junction diode	45	BB	R1
4	Energy band structure	45	BB	R1
5	current equation	45	BB	R1
6	space charge and diffusion capacitances	45	BB	R1
7	effect of temperature	45	BB	R1
8	breakdown mechanism	45	BB	R3
9	Zener diode and its characteristics	45	BB	R3
<b>UNIT -4 (TRANSISTORS)</b>				
1	Principle of operation of PNP and NPN transistors	45	BB	R1
2	study of CE, CB and CC configurations	45	BB	R1
3	comparison of their characteristics	45	BB	R1
4	Breakdown in transistors	45	BB	R1
5	operation and comparison of N Channel	45	BB	R1
6	drain current equation	45	BB	R1
7	MOSFET	45	BB	R1
8	Enhancement and depletion types	45	BB	R1
9	structure and operation	45	BB	R1
<b>UNIT -5 (SPECIAL SEMICONDUCTOR DEVICES)</b>				
1	Tunnel diodes	45	BB	R1
2	PIN diode	45	BB	R1

3	varactor diode	45	BB	R1
4	SCR characteristics and two transistor equivalent	45	BB	R1
5	UJT	45	BB	R1
6	Diac and Triac	45	BB	R1
7	Laser, CCD, Photodiode	45	BB	R1
8	Photoconductive and Photovoltaic cells	45	BB	R1
9	LED, LCD	45	BB	R1