



**VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**



**LESSON PLAN**

SUBJECT CODE & NAME : U15EE303& Electric Circuit Theory  
YEAR / SEMESTER : II EEE A&B / III

Session No.	Topics to be Covered	Duration in minutes	Teaching Aid	Ref.Book
<b>UNIT-I BASIC CIRCUITS ANALYSIS</b>				
1	Fundamental concepts of R, L and C elements	45	BB	R-01, R-02
2	DC circuits, series and parallel circuits	45	BB	R-01, R-02
3	Tutorial I	45	BB	R-01, R-02
4	Loop and Nodal analysis-problems	45	BB	R-01, R-02
5	A.C circuits - complex impedance	45	BB	R-01, R-02
6	Tutorial II	45	BB	R-01, R-02
7	Phasor diagram, Real and Reactive power	45	BB	R-01, R-02
8	Tutorial III	45	BB	R-02
9	Phasor diagram Applied to AC circuits.	45	BB	R-02
10	Phasor diagram Applied to AC circuits-cotn..	45	BB	R-02
11	Revision-Loop and Nodal Analysis	45	BB	R-02
12	Revision	45	BB	
<b>UNIT-II NETWORK THEOREMS</b>				
1	Voltage source transformations		BB	R-03
2	Current source transformations	45	BB	R-03
3	Various Network theorems	45	BB	R-03
4	Superposition Theorem	45	BB	R-03
5	<b>Thevenin's and Norton's Theorem</b>	45	BB	R-03
6	Tutorial I	45	BB	R-03
7	Maximum Power Transfer Theorem	45	BB	R-03
8	Tutorial II	45	BB	R-03
9	Reciprocity Theorem	45	BB	R-03
10	Applications to dc and ac circuits	45	BB	R-03
11	Star-delta transformations	45	BB	R-03
12	Revision	45	BB	
<b>UNIT - III RESONANCE AND COUPLED CIRCUITS</b>				
1	Resonance in series and parallel circuits	45	BB	R-02
2	Resonance in series and parallel circuits-cotn..	45	BB	R-02
3	Self Inductances	45	BB	R-02
4	Mutual Inductances	45	BB	R-02

5	Coefficient of coupling	45	BB	R-02
6	Dot convention	45	BB	R-02
7	Tutorial I	45	BB	R-02
8	Analysis of coupled circuits	45	BB	R-02
9	Tutorial II	45	BB	R-02
10	Revision	45	BB	
11	Revision II	45	BB	
12	Revision III	45	BB	
<b>UNIT – IV</b>				
<b>THREE PHASE CIRCUITS</b>				
1	Three - phase star and delta circuits	45	BB	R-02
2	Three - phase star and delta circuits-cotn..	45	BB	R-02
3	Balanced load power power measurements	45	BB	R-02
4	Balanced load power power measurements-cotn..	45	BB	R-02
5	Tutorial I	45	BB	R-02
6	Unbalanced load power power measurements	45	BB	R-02
7	Unbalanced load power power measurements-cotn..	45	BB	R-02
8	Tutorial II	45	BB	R-02
9	Power factor calculations	45	BB	R-02
10	Bbalanced and unbalanced loads -	45	BB	R-02
11	Tutorial-III	45	BB	R-02
12	Revision	45	BB	
<b>UNIT – V</b>				
<b>TRANSIENT RESPONSE FOR DC AND AC CIRCUITS</b>				
1	Time response of RL	45	BB	R-02, R-03
2	Time response of RL -cont	45	BB	R-02, R-03
3	Time response of RC	45	BB	R-02, R-03
4	Time response of RC-cont.	45	BB	R-02, R-03
5	Tutorial I	45	BB	
6	Time response of RLC	45	BB	R-02, R-03
7	Time response of RLC-cont.	45	BB	
8	Tutorial II	45	BB	R-02, R-03
9	Circuit steps for RLC	45	BB	R-02, R-03
10	Sinusoidal inputs	45	BB	R-02, R-03
11	Tutorial III	45	BB	R-02, R-03
12	Time response of RL, RC and RLC circuits for step and sinusoidal inputs.	45	BB	R-02, R-03

**REFERENCES:**

1.	<b>William H. Hayt Jr, Jack E. Kemmerly and Steven M. Durbin,"Engineering Circuits Analysis", Tata McGraw Hill publishers, 6<sup>th</sup> edition, New Delhi, 2003</b>
2.	<b>Charles K. Alexander, Matthew N. O. Sadiku, 'Fundamentals of Electric Circuits', McGraw-Hill Publications, 3rd Edition, 2007.</b>
3.	<b>Joseph. A. Edminister, 'Electric Circuits - Schaum's outline series', McGraw Hill Publications, 6<sup>th</sup> Edition, 2003.</b>