

	<b>GURGAON INSTITUTE OF TECHNOLOGY &amp; MANAGEMENT</b>	
	Department : Electrical Engineering Branch / Sem : ECE/EE / 2 <sup>ND</sup>	Session :Jan-June2018 Subject Name & Code :Electrical technology ( EE-101-F)
<b>LESSON PLAN</b>		<b>TEACHER : Ms. Ritu Sharma</b>

**Books Referred:**

1. Electrical Engineering Fundamentals by Deltoro.PHI
2. Network Analysis by Valkenburg
3. A Textbook Of Electrical Technology by B.L. Thereja (Vol.1 and Vol.2)

Lecture No.	Topics to be Covered
1.	<b>SECTION A: D.C. Networks Laws and Theorems</b> Ohm's Law
2.	Series, parallel combination of resistances, Kirchhoff's Laws
3.	numerical
4.	Loop methods of analysis
5.	Numerical
6.	Nodal analysis
7.	numerical
8.	Star to Delta & Delta to Star transformation
9.	Numerical
10.	Superposition theorem, numerical
11.	Thevenin's theorem, numerical
12.	Norton's theorem, numerical
13.	numerical
14.	Maximum power transfer theorem, Milman's theorem
15.	<b>SECTION B: Single Phase A.C. Circuits</b> Sinusoidal signal, instantaneous and peak values ,RMS and average values, crest and peak factor

16.	Concept of phase, phasor representation-polar & rectangular exponential and trigonometric forms
17.	Behaviors of R,L and C components in A.C. circuits
18.	Concept of active and reactive power, power factor
19.	Series A.C. circuits
20.	Parallel A.C. circuits
21.	Series Resonance
22.	Parallel Resonance
23.	Q factor, cut-off frequencies and bandwidth.
24.	Numerical
25.	<b>SECTION C: Three Phase A.C Circuits</b> Phase and line voltages and currents
26.	Balanced star circuits
27.	delta circuits, power equation
28.	Measurement of power by two wattmeter method, Introduction to unbalanced circuits
29.	Numerical
30.	<b>Transformers</b> Construction, EMF equation
31.	Ideal transformer, Phasor diagram on no load
32.	Phasor diagram on full load ,equivalent circuit
33.	losses, Open and short circuit test
34.	regulation and efficiency, Application of DC machines Moving Coil Type
35.	<b>SECTION D: Unit 5: Electrical Machine</b> Construction , Principle
36.	Working, E.M.F. equation ,losses of D.C. machine
37.	Comparison of construction and working of D.C. machine with Induction motor, synchronous machine
38.	<b>Measuring Instruments</b> Construction, operation of moving iron type
39.	moving coil type Uses of moving iron type and moving coil type ,induction type ammeter, voltmeter

40.	Watt meter, Energy meter
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