UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA

Academic Lesson Plan for 1st Semester – 2024 (Winter)

Name of the teaching faculty: UMESH CHANDRA SETHI
Designation- Guest Faculty(Electrical Engg.)
Dept.: Department of Electrical Engg.
Semester : 1st
Subject : Theory 4(a) : Fundamentals of Electrical & Electronics Engineering.
No of Periods per week: 4,   Total Periods: 60
End semester Exam.: 70Marks,   Internal Assmnt/Sessional-30Marks
Total Marks: 100Marks

Week	Period	Unit/Chapter	Topics to be Covered
1ST	1ST	Unit IV Electric and Magnetic Circuits:	EMF, Current, Potential Difference,
	2ND		Power and Energy; M.M.F, magnetic force,
2ND	1ST		permeability, hysteresis loop, reluctance,
	2ND		leakage factor and BH curve;
3RD	1ST		Lenz's law; Dynamically induced emf;
	2ND		Electromagnetic induction
4TH	1ST		Faraday's laws of electromagnetic induction,..
	2ND		Statically induced emf; Equations of self
5TH	1ST		And mutual inductance; Analogy between electric and magnetic circuits
	2ND	Unit V A.C. Circuits:	Cycle, Frequency, Periodic time, Amplitude
6TH	1ST		Angular velocity, RMS value, Average value, Form Factor Peak Factor
	2ND		impedance, phase angle, and power factor;
7TH	1ST		Mathematical and phasor representation of alternating emf and current;
	2ND		Voltage and Current relationship in Star and Delta connections;
	1ST		A.C in resistors, inductors and capacitors

8TH	2ND		A.C in R-L series, R-C series,
9TH	1ST		R-L-C series and parallel circuits;
	2ND		Power in A. C. Circuits, power triangle
10TH	1ST	Unit VI Transformer and Machines:	General construction and principle of different type of transformers
	2ND		General construction and principle of different type of transformers
11TH	1ST		Emf equation and transformation ratio of transformers;
	2ND		Emf equation and transformation ratio of transformers;
12TH	1ST		Auto transformers
	2ND		Construction and Working principle of DC motors
13TH	1ST		Construction and Working principle of DC motors
	2ND		Construction and Working principle of DC motors
14TH	1ST		Basic equations and characteristic of motors…
	2ND		Basic equations and characteristic of motors
15TH	1ST		Basic equations and characteristic of motors
	2ND		REVISION

Sri.Umesh Chandra Sethi

Guest Faculty(Electrical Engg),
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