

Lesson Plan

Name of Faculty : Pooja Malik

Discipline : Electronics and Communication

Semester : Ist Sem

Subject : FEE

Lesson Plan Duration: 15 weeks(from October 2022 to January 2023)

Work Load (lecture per week (in hours): Lectures- 03

Week	Theory	
	Lecture Day	Topic(including assignment/test)
1	1	Unit 1 :Electrical Fundamentals Nature of Electricity
	2	Charge, free electrons, Electric current, Electric potential
	3	potential difference, Electric current, Electrical Energy
2	4	Electrical power and their unit.
	5	Resistance: Definition, Unit, Laws of resistance
	6	conductivity and resistivity, Effect of temperature on resistance
3	7	Temperature coefficient of resistance
	8	Types of resistance & their applications
	9	Color coding of resistance
4	10	Inductors and capacitors with their wattage consideration. Assignment 1
	11	Factors affecting capacitance of a capacitor. Capacitors in series and parallel
	12	Unit 2: DC Circuits & Theorems Ohm's law and its verification
5	13	Kirchhoff's current law and Kirchhoff's voltage law
	14	Star – Delta connections.
	15	Ist sessional exam
6	16	Voltage and current source, symbol and graphical representation
	17	Characteristics of ideal and practical sources.
	18	Mesh and Loop analysis, Assignment 2
7	19	Thevenin's theorem, Norton's theorem

	20	Superposition Theorem, Maximum Power Transfer Theorem.
	21	Unit 3: AC Circuits, AC Fundamentals: Cycle, frequency, time period, amplitude, difference between AC and DC, instantaneous value, average value, r.m.s. value, maximum value, form factor and peak factor
8	22	Concept of conductance, susceptance, admittance, impedance and concept of inductive and capacitive reactance
	23	RL-RC Circuits
	24	Introduction to series and parallel resonance and its conditions
9	25	Power in pure resistance, inductance and capacitance, power in combined RLC circuits.
	26	Power factor, active and reactive power: Definition and their significance.
	27	2nd Sessional Test
10	28	Unit 4: Electro Magnetic Circuit, Concept of electro-magnetic field produced by flow of electric current, magnetic circuit
	29	concept of magneto-motive force (MMF), flux, reluctance, permeability
	30	analogy between electric and magnetic circuit, Faraday's laws of electro-magnetic induction
11	31	Principles of self and mutual induction, self and mutually induced emf.
	32	Energy stored in an inductor, series and parallel combination of inductors. Assignment 3
	33	Unit 5: Batteries, Basic idea of primary and secondary cells, solar cell, solar panel & applications
12	34	Construction, working principle and applications of Lead-Acid, Nickel-Cadmium, Li Ion batteries
	35	Series and parallel connections of batteries. Introduction to maintenance of free batteries. Disposal of batteries
	36	3rd sessional test
13	37	Revision of unit 1
	38	Revision of unit 2
	39	Revision of unit 3

14	40	Revision of unit 4
	41	Revision of unit 5
	42	Very short answer questions revision
15	43	Short answer questions revision
	44	Long answer questions revision
	45	Revision