

Lesson Plan

Name of the faculty: Dr. Neha Chachra.

Discipline: Electronics in Daily Life

Semester: 1st -BCA

Subject: Electronics in Daily Life

Lesson Plan Duration: **15weeks**

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/ test)	Practical Day	Topic
1 st	1	Basic atomic structure and energy levels	1	Operation and use of instruments
	2	Conductors, insulators, semiconductors	2	Multi meter, CRO, signal generator, LCR meter
	3	Atomic structure of Ge & Si bonds		Regulated power supply
2 nd	4	Energy level diagrams of conductors	3	V-I characteristics of PN junction
	5	Energy level diagrams of insulators	4	Practical file
	6	Energy level diagrams of semi conductors		
3 rd	7	Minority and majority charge carriers	5	V-I characteristics of zener diode
	8	P&N types semi conductors & their conductivity	6	Practical file
	9	Effect of temperature of intrinsic semi conductors		
4 th	10	Semiconductor diode-pn junction diode	7	Measurement of voltage gain, i/o & o/p impedance
	11	Forward & reverse condition	8	V-I characteristics of PN junction
	12	V-I characteristics of pn junction		
5 th	13	Half wave rectifier, full wave rectifier	9	Half wave rectifier ckt using one diode
	14	Bridge rectifier, rectification efficiency	10	Practical file
	15	Peak inverse voltage, ripple factor		
6 th	16	Shunt and series capacitor filter	11	Full wave rectifier ckt using two diodes
	17	LC and pie filters	12	Practical file
	18	Types of diodes-zener & avalanche breakdown		

7 th	19	Clipping and clamping circuits	13	Shunt capacitor filter
	20	Concept of Bipolar transistors & structure	14	Series inductor filter. RC filter
	21	PNP and NPN transistors		
8 th	22	CB, CE, CC Configurations of a transistor	15	I/o characteristics of CE configuration
	23	I/p & o/p characteristics in CB& CE	16	
	24	Current amplification factors		
9 th	25	Comparison of CB, CE, CC configurations	17	
	26	Transistor as an amplifier in CE config.	18	Checking practical file
	27	Dc load line & calculation of current gain & voltage gain		
10 th	28	Transistor biasing circuits, Selection of Operating point	19	Checking practical file
	29	WRITTENTEST	20	Checking practical file
	30	Need for stabilization of operating point		
11 th	31	Different types of biasing circuits	21	Checking practical file
	32	Single stage transistor amplifier circuit	22	Checking practical file
	33	Concept of dc & ac load line & its use		
12 th	34	Explanation of phase reversal of output voltage with respect to input voltage	23	Checking practical file
	35	Field effect transistors	24	Checking practical file
	36	Construction of FET, Operation of FET		
13 th	37	WRITTENTEST	25	Checking practical file
	38	Characteristics of FET and applications	26	V-I characteristics of FET.
	39	Construction of MOSFET		
14 th	40	Operation of MOSFET	27	Checking practical file
	41	Characteristics of MOSFET	28	Checking practical file
	42	Depletion & enhancement mode		
15 th	43	C-MOS advantages applications	29	Checking practical file
	44	Comparison of JFET, MOSFET, BJT	30	Checking practical file
	45	FET amplifier ckt & working principle		

