Lesson Plan(6.3.23 -23.6.2023)
Program : Electronics and Communication Engg.
Subject:Electronic Devices and Circuits-I
Work Load(Lecture/Practical)per week : 03hrs(lecture),04hrs per group(practical)

Name of Faculty : Ms. Sumitra Sangw
Semester - 2nd

Week No	Lecture No	THEORY	PRACTICAL
1 week	1st lecture	Introduction about the subject	Introduction about the subject practicals
	2nd lecture	**UNIT1:** Basic atomic structure,energy levels	
	3rd lecture	insulators,conductor & semiconductor concept	
2 week	1st lecture	Germanium and Silicon structure, covalent bonds	Plotting of V-I characterstics of a PN junction diode
	2nd lecture	Intrinsic and Extrinsic semi conductor, concept of Doping	
	3rd lecture	conductor, insulators,semicondutor - energy level diagram , minority and majority charge carriers	
3 week	1st lecture	P & N type semi conductor, current flow mechanism	Plotting of V-I characterstics of a Zener diode
	2nd lecture	effect of temperature on conductivity of intrinsic semi conductor	
	3rd lecture	**UNIT2:**PN junction diode, mechanism of current flow , forward and reversed biased, potential barrier	
4 week	1st lecture	Drift and diffusion currents, depletion layer, junction capacitance concept	To observe input and output of series clipping circuits
	2nd lecture	V-I characterstics of PN junction Diode, static and dynamic resistance	
	3rd lecture	application of diode as half wave, full wave and bridge rectifier	
5 week	1st lecture	peak inverse voltage, rectification efficiencies and ripple factor calculations	To observe input and output of shunt clipping circuits
	2nd lecture	shunt capacitor filter, series inductor filter,	
	3rd lecture	**1st Sessional**	
6 week	1st lecture	LC and π filter	To observe input and output of positive clamping circuit
	2nd lecture	Types of diodes	
	3rd lecture	Zener diode and avalanche breakdown	
7 week	1st lecture	clipping and clamping circuits	To observe input and output of negetive clamping circuit
	2nd lecture	**UNIT3:**Bipolar transistor concept and its structure	
	3rd lecture	PNP transistor- symbol and mechanism of current flow	
8 week	1st lecture	NPN transistor- symbol and mechanism of current flow	fabrication of half wave rectifier circuit on breadboard and observe the output
	2nd lecture	Current relations in transistor, leakage current concept	
	3rd lecture	CB,CE & CC configurations of a transistor	
9 week	1st lecture	input and output characterstics ans dynamic resistance in CB configuration	fabrication of full wave rectifier circuit on breadboard and observe the output
	2nd lecture	input and output characterstics ans dynamic resistance in CE configuration	
	3rd lecture	Current amplification factors,Relation between α,β,γ	
10 week	1st lecture	Comparision of CB,CE,CC configuration	plotting of the wave shape of full wave rectifier with Shunt capacitor filter and series inductor filter
	2nd lecture	Concept of DC load line and calculation of current and voltage gain	
	3rd lecture	**2nd Sessional**	
11 week	1st lecture	**UNIT4:**concept of transistor biasing and selection of operating point	plotting of input and output characterstics and calculation of parameters of transistors in CE configuration
	2nd lecture	need for stabilization of operating point	
	3rd lecture	Different types of biasing circuits	
12 week	1st lecture	single stage transistor amplifier circuit	plotting of input and output characterstics and calculation of parameters of transistors in CB configuration
	2nd lecture	concept of DC and AC load line and its use	
	3rd lecture	phase reversal of output voltage with respect to input voltage	
13 week	1st lecture	**UNIT5**:Operation and characterstics of FET's and their application	Measurements of voltage gain, input and output impedance in a single stage CE amplifier circuit
	2nd lecture	construction,operation and characteristics of a MOSFET in Depletion and enhancement mode	
	3rd lecture	Applications of MOSFET	
14 week	1st lecture	Comparision of JFET, MOSFET and BJT	Plotting of V-I characterstics of FET
	2nd lecture	**REVISION**	
	3rd lecture	**3rd SESSIONAL**	
15 week	1st lecture	**REVISION**	Revision and viva
	2nd lecture	**REVISION**	
	3rd lecture	**REVISION**	
16 week	1st lecture	**CLASS TEST(UNIT NO 1 & 2)**	Revision and viva
	2nd lecture	**CLASS TEST(UNIT NO 3 & 4)**	
	3rd lecture	**CLASS TEST(UNIT NO 5)**	

*Extra classes taken in arrangement periods and practical labs.