Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
1	1	PN- Junction diode: working.				
2	1	PN- Junction diode: formation of the depletion layer				
3	1	PN- Junction diode: construction.				
4	1	PN- Junction diode: symbol and equivalent circuits				
5	1	PN- Junction diode: Barrier potential voltage.				
6	1	PN- Junction diode: Forward and reverse biasing.				
7	1	PN- Junction diode: V-I characteristics of diode.				
8	1	PN- Junction diode: Diode current equation.				
9	1	PN- Junction diode: Static and Dynamic resistance.				
10	1	PN- Junction diode: Diode capacitance.				
11	1	LED: Symbol, working and characteristic				
12	1	Photodiode: Symbol, working and characteristic				

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
13	1	Varactor diode: Symbol, working and characteristic				
14	2	Need for rectification				
15	2	Rectifier Parameters: Peak Inverse Voltage(PIV),Transformer utilization actor(TUF) of rectifiers				
16	2	Rectifier Parameters: PIV, Ripple factor, Efficiency,				
14	2	Types of rectifier: Half Wave Rectifier, Full Wave rectifier.				
18	2	Center taped full wave rectifier				
19	2	Bridge type full wave rectifier				
20	2	Filter Circuit: C–filter, LC- filter.				
21	2	Filter Circuits: L–filter, LC- filter.				
22	2	Filter Circuit: CLC filter.				
23	3	Zener diode: working				
24	3	Zener diode: construction and equivalent circuits of Zener diode				

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
25	3	Zener diode: construction and equivalent circuits of Zener diode				
26	3	Zener and avalanche breakdown phenomenon				
27	3	Zener diode as voltage regulator				
28	3	Clipper: Function of clipper circuit, types of clipper : positive and negative clipper circuits				
29	3	Clipper: Function of clipper circuit, types of clipper : positive and negative clipper circuits				
30	3	Clipper: Function of clipper circuit, types of clipper : positive and negative clipper circuits				
31	3	Clamper: Function of clamper, types of clamper, positive and negative clamper circuits				
32	3	Clamper: Function of clamper, types of clamper, positive and negative clamper circuits				
33	4	Working, Types of BJT: NPN and PNP.				
34	4	Construction and operation of NPN and PNP transistor.				
35	4	Construction and operation of NPN and PNP transistor.				
36	4	Modes of operation : active, saturation and cutoff, current amplification factor β and α				

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
37	4	Modes of operation : active, saturation and cutoff, current amplification factor β and α				
38	4	Transistor biasing: need for biasing, types of biasing, thermal runaway				
39	4	Transistor biasing: need for biasing, types of biasing, thermal runaway				
40	4	Transistor configurations: Common Emitter(CE), configuration circuit , working and input and output characteristics.				
41	4	Transistor configurations: Common Base(CB) and Common collector configuration circuit , working and input and output characteristics.				
42	4	Transistor configurations: Common collector configuration circuit , working and input and output characteristics.				
43	4	Field Effect Transistor(FET): Working, construction.				
44	4	Field Effect Transistor(FET): input and output characteristics, drain current, pinch-off voltage.				
45	5	Basics of differential amplifier, Working principle				
46	5	Input and output characteristics of OP-AMP				
47	5	Basics of Op-Amp: OP-AMPIC-741, functional block diagram, virtual ground.				
48	5	configurations of working :inverting and non inverting, parameters : I/O resistance, gain, slew rate, bandwidth, power.				

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
49	5	Applications op-amp : Summing amplifier.				
50	5	Applications op-amp : multiplier amplifier.				
51	5	Applications op-amp : Divider amplifier.				
52	5	Applications op-amp : integrator amplifier.				
53	5	Applications op-amp : differentiator amplifier.				
54	5	Applications op-amp : Log and Anti-Log amplifier.				
55	5	Applications op-amp : Log and Anti-Log amplifier.				

Signature of Lecturer

Signature of HOD