LESSON PLAN

Name of Faculty : **Priyanka Chaudhary**
Discipline : **Electronics & Communication Engg.**
Semester : **2nd sem**
Subject : **Electronic Devices & Circuits**
Lesson Plan Duration : **17 weeks**

Week		Theory	Practical	
	Lecture Day	Topic (Including Assignment/ Test	Practical Day	Topic
1st	1	Review of Amplifiers	1	Review of Lab/ Practicals.
	2	Need for multistage amplifier & Gain of multistage amplifier		
	3	RC coupled multistage amplifier, its frequency response and bandwidth		
2nd	4	Transformer coupled Multistage Amplifier, its frequency response and bandwidth.	2	Plot the frequency response of two stage RC coupled amplifier and calculate the bandwidth and compare it with single stage amplifier.
	5	Direct coupled multistage amplifier, its frequency response and bandwidth.		
	6	Difference between voltage and power amplifiers, Importance of impedance matching in amplifiers.		
3rd	7	Class A & Class B amplifiers,	3	To measure the gain of push-pull amplifier at 1 KHz.
	8	Class AB and Class C amplifiers, collector Efficiency & Distortion in Class A, B, C amplifiers.		
	9	Single ended Power amplifiers, Graphical method of calculation (without derivation of output power, heat dissipation curve an importance of heat sinks.		
4th	10	Push Pull Amplifier	4	Revision / File Assessment
	11	Complementary Symmetry Push-Pull amplifier.		
	12	Assignment topic/Test/Quiz.		
5th	13	Basic principal and types of feedback, derivation of expression for gain of an amplifier employing feedback	5	To measure the voltage gain of emitter follower circuit and plot its
	14	Effect of feedback (negative) on gain,		

		stability, distortion and bandwidth of and amplifier.		frequency.
	15	RC coupled amplifier with emitter bypass capacitor.		
6th	16	Emitter follower amplifier and its application.	6	Revision
	17	Assignment –Topic & Class work Checking		
	18	Expert lecture		
7th	19	Sessional Test	7	Plot the frequency response curve of Hartley and Colpitt's Oscillator
	20	Use of positive feedback, Bark-hausen criterion for oscillations.		
	21	Working principle of Tunned Collector Oscillator		
8th	22	Working principle of Hartley and Colpitt's Oscillator Circuits.	8	Plot the frequency response curve of phase shift and Wein bridge Oscillator.
	23	Working principle of Phase shift and wein- bridge Oscillator Circuits.		
	24	Working principle of crystal Oscillator Circuit.		
9th	25	Revision	9	Revision
	26	Series and parallel resonant circuit and bandwidth of resonant circuits.		
	27	Single tuned voltage amplifier & its frequency response.		
10th	28	Double tuned voltage amplifier & its frequency response.	10	Use of IC 555 as monostable multivibrator and observe the output for different values
	29	Expert Lecture		
	30	Working principle of transistor as switch.		
11th	31	Concept of multi-vibrator: a stable, mono-stable, and bistable and their applications.	11	Use of IC as a stable multivibrator and observe the output at different duty cycles.
	32	Concept of multi-vibrator: a stable, mono-stable, and bistable and their applications.		
	33	Concept of multi-vibrator: a stable, mono-stable, and bistable and their applications.		
12th	34	Block diagram of IC555 and its working and applications.	12	Revision
	35	IC555 as monostable and astable multi-vibrator and bistable multivibrator.		

	36	Assignment topic/sessional.		
13th	37	Characteristics of an ideal operational amplifier and its block diagram.	13	To use IC 741 (op-amp) as 1.Inverter 2. Adder 3.Subtractor 4.Integrator
	38	IC-741 and its pin configuration		
	39	Definition of differential voltage gain, CMRR, PSRR, slew rate and input offset current.		
14th	40	Operational amplifier as an inverter, scale change, adder Subtractor, differentiator, and integrator.	14	To realize positive and negative fixed voltage DC power supply using three terminal voltage regulator IC (7805, 7812
	41	Operational amplifier as an inverter, scale change, adder Subtractor, differentiator, and integrator		
	42	Operational amplifier as an inverter, scale change, adder Subtractor, differentiator, and integrator.		
15th	43	Concept of DC power supply, line and load regulation	15	Prototype making/ practice
	44	Concept of fixed voltage, IC regulators 9like 7805, 7905), and variable		
	45	Voltage regulator like (IC 723)		
16th	46	Revision/ seminar	16	Viva Voice
	47	Revision/ Seminar		
	48	Sessional		
17th	49	Revision/ seminar	17	Viva Voice
	50	Revision/ Seminar		
	51	Sessional		

Lesson Plan Duration : JAN 2026 -MAY 2026 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 04 HOURS (04 Hours*2 Groups) (PRACTICAL)		
Name of the Faculty: PRIYANKA CHAUDHARY Discipline : Electronics and Communication Engg. Subject :EIM Semester : IInd		
Week	**Theory**	**Practical**
	Topic (including assignment/ test)	
1st	**Introduction about subject**	
	Syallabus of the subject	
2nd	**Unit-1.Basics of measurements- Measurement, method of measurement, types of instruments**	**Measurement of voltage, resistance, current using analog multimeter**
	Specifications of instruments Accuracy, precision	
	Specifications of instruments sensitivity, resolution, range, errors in measurement	
3rd	**sources of errors, limiting errors,**	**Measurement of voltage, resistance, frequency using digital multimeter**
	loading effect, importance and applications of standards and	

	calibration	
	Class work/Assignment and revision.	
4th	Unit-2 .Voltage ,Current and Resistance Measurement- Principles of measurement of DC voltage	To study the front panel controls of CRO
	Principles of measurement of DC current	
	Principles of measurement of AC voltage	
5th	Principles of measurement of AC current	Measurement of voltage, frequency, time period and phase using CRO
	Principles of operation and construction of permanent magnet moving coil (PMMC) instruments	
	1st Sessional Test	
6th	Moving iron type instruments	Measurement of voltage, frequency, time and phase using DSO
	VOM meter	
	Class work and revision.	
7th	Unit-3. Cathod Ray Oscilloscope-Construction and working of Cathode Ray Tube(CRT)	Measurement of phase using lissajous pattern on CRO.
	Block diagram description of a basic CRO and triggered sweep oscilloscope	
	Front panel controls	
8th	Specifications of CRO and their applications	Measurement of unknown resistance using Wheat Stone bridge.
	Measurement of current, voltage, frequency using CRO	
	Measurement of time period and phase using CRO	
9th	lissajous pattern for phase measurement	Measurement of Q of a coil
	Digital storage oscilloscope (DSO): block diagram and working principle	
	Class work/Assignment and revision.	
10th	Unit-4.Impedance Bridge & Q Meter- Wheat stone bridge	Measurement of inductance using Hay's Bridge.
	AC bridges: Maxwell's induction bridge	
	2nd Sessional Test	
11th	Hay's bridge,	Measurement of inductance using Maxwell Induction Bridge.
	De-Sauty's bridge,	
	Block diagram and working principle of Q meter	
12th	Explanation of block diagram, specifications of low frequency generator	
	RF generators	Measurement of impedance using Maxwell Induction Bridge