LESSON PLAN

Name of Faculty : Arshad Jamal

Discipline : Electronics & Communication Engineering

Semester : 3rd

Subject : Electronic Devices & Circuits-2

Lesson Plan Duration : 16 weeks (20th August 2024 to 6th December 2 Work load (Lecture / Practical): Lectures—03, Practical—02 per week (in hours)

		Theory	Practical	
Week	Lecture Day	Topic (Including Assignment/ Test)	Practical Day	Topic
1 st	1	Unit-1 (Multistage Amplifier) Need and gain for multistage amplifier, different types of multistage amplifier.	1	Review of Lab/ Practical.
	2	Types of multistage amplifier: - RC coupled amplifier.		
	3	RC coupled amplifier, frequency response and bandwidth.		
2 nd	4	Types of multistage amplifier: - Direct coupled amplifier.	2	Plot the frequency response of two stages RC coupled amplifier and calculate the bandwidth.
	5	Direct coupled amplifier and Transformer coupled amplifier.		
	6	Transformer coupled amplifier, frequency response and bandwidth.		
3 rd	7	Unit-2 (Large signal Amplifier) Difference between voltage and power amplifier, Importance of impedance matching in amplifier.	3	To measure the gain of Push-Pull amplifier.
	8	Class A, Class B, Class AB and Class C amplifiers.		
	9	Collector efficiency and distortion in amplifier.		
4 th	10	Single ended power amplifiers, graphical method of calculation of output power, heat dissipation curve and its importance.	4	To measure the voltage gain of emitter follower circuit and plot its frequency response.
	11	Push-pull amplifier and complementary Push-pull amplifier.		
	12	Revision		
5 th	13	Assignment topic/Test/Quiz.		
	14	Expert lecture/Revision/ seminar	5	Revision
	15	Sessional exam		
6 th	16	Assignment -Topic & Class work Checking		To observe the output waveforms of Hartley Oscillator.
	17	Unit-3 (Feedback in Amplifiers) Basic principles and types of feedback.	6	
	18	Derivation of expression for gain of an amplifier employing feedback.		
7 th	19	Effect of feedback (negative) on gain, stability, distortion and bandwidth of an amplifier.	7	To observe the output waveforms of Colpitt's Oscillator.
	20	RC coupled amplifier with emitter bypass capacitor.		
	21	Emitter follower amplifier and its applications.		
8 th	22	Revision / seminar	8	Revision
	23	Assignment topic/Test/Quiz.		
	24	Expert lecture/Revision		

See Use of positive feedback. 26		o =	Unit-4(Sinusoidal Oscillators)		
Second Park	9th	25		9	output waveforms of RC phase shift
types of oscillator. 27 Tuned collector oscillator and its working principle. 28 Hartley and Colpitts oscillators and its working principle. 29 Phase shift oscillator and its working principle. 30 Wien's bridge oscillator and its working principle. 31 Revision/ seminar 32 Assignment topic/Test/Quiz. 33 Expert lecture/Revision 34 Assignment topic/Sessional exam. 35 Unit-5 (Multivibrator Circuits and Operational amplifiers) Working principle of transistor as a switch. 36 Astable multivibrators and their applications. 37 Astable multivibrator in detail. 38 Monostable and Bistable multivibrator in detail. 39 Pin and block diagram of IC 555, working and applications. 40 IC 555 as a Monostable and Astable multivibrator. 40 IC 555 as a Monostable and Astable multivibrator. 41 Operational amplifier: - IC 741 and its pins configuration. 42 Definition of differential voltage gain, CMRR, PSRR, Slew rate and input offset current. 43 Assignment - Topic & Class work Checking 44 Assignment - Topic & Class work Checking 45 Assignment - Topic & Class work Checking 46 Revision/seminar 16 Wiva Voice		26			
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