

Govt Polytechnic, Nilokheri
Electrical Engineering Department
Lesson plan

Name of Faculty		Sh. Sanjeev Kumar		
Discipline		Electrical Engineering		
Semester		3 rd		
Subject		Electronics-II		
Lesson Plan Duration		From July2018 to Nov2018		
Work load (Theory + Practical) Per Week		[03 + 03] Group1&2		
Week	Day	Theory Topic/ Assignment/ Test	No.	Practical
1 st	1	Unit:1 Transistor Audio Power Amplifier	1	To study the effect of coupling capacitor on lower cut off frequency and upper cut off frequency by plotting frequency response curve of a two stage RC coupled amplifier
	2	Difference between voltage and power amplifier		
	3	Terms in Power Amplifier, collector efficiency, distortion and dissipation capability		
2 nd	1	Classification of power amplifier class A, B and C	2	To measure (a) optimum load (b) output power (c) signal handling capacity of a push-pull amplifier
	2	Class A single-ended power amplifier, its working and collector efficiency Impedance matching in a power amplifier using transformer		
	3	Heat sinks in power amplifiers, Push-pull amplifier: circuit details working and advantages		
3 rd	1	Principles of the working of complementary symmetry push-pull amplifier	3	To measure (a) voltage gain (b) input and output impedance for an emitter follower circuit
	2	Revision/Assignment of 1 st unit		
	3	Class test of 1 st unit		
4 th	1	Unit-2 Introduction to tuned voltage amplifier	4	Practical Quiz No.2/ Revision and file checking
	2	Series and parallel resonance, Single and double tuned voltage amplifiers		
	3	Frequency response of tuned voltage amplifiers, Applications of tuned voltage amplifiers		
5 th	1	Revision/Assignment of 2 nd unit	5	To measure frequency generation in (a) Hartley (b) R-C Phase Shift oscillator
	2	Class test of 2 nd unit		
	3	Unit3: Feedback in Amplifiers positive and negative feedback and their need		
6 th	1	Voltage gain of an amplifier with negative feedback $A = A/(1+\beta A)$	6	Practical Quiz No.3/ Revision and file checking
	2	Effect of negative feedback on voltage gain, stability, distortion, band width		
	3	Output and input impedance of an amplifier		
7 th	1	Typical feedback circuits	7	To observe the differentiated and integrated square wave on a CRO for different values of R-C time constant
	2	Effect of removing the emitter by-pass capacitor on a CE transistor amplifier		
	3	Emitter follower and its applications		
8 th	1	Revision/Assignment of 3 rd unit		Clipping of both portion of sine-
	2	Unit4: Sinusoidal oscillators amplifier positive		

		feedback		wave using: diode and dc source/ Zener diodes
	3	Difference between an oscillator and an alternator	8	
9 th	1	Essentials of an oscillator, Circuit details and working of LC oscillators	9	Clamping a sine-wave to: Negative dc voltage Positive dc voltage
	2	Tuned Collector, Hartley		
	3	and Colpitt's oscillators, R-C oscillator circuits		
10 th	1	phase shift and Wein bridge oscillator circuits	10	Practical Quiz No.3/ Revision and file checking
	2	Introduction to piezoelectric crystal and crystal oscillator circuit		
	3	Revision/Assignment of 4 th unit		
11 th	1	Wave-Shaping and Switching Circuits	11	To generate square-wave using an astable multivibrator and to observe the wave form on a CRO
	2	Concept of Wave-shaping circuits		
	3	R-C differentiating and integrating circuits		
12 th	1	Diode clipping circuits, Diode clamping circuits	12	To observe triggering and working of a bistable multivibrator circuit and observe its output wave form on a CRO
	2	Applications of wave-shaping circuits, Transistor as a switch		
	3	Collector coupled astable, monostable, Bistable multivibrator circuits		
13 th	1	Working and applications of transistor inverter circuit using power transistors	13	Practical Quiz No.3/ Revision and file checking
	2	Revision/Assignment of 5 th unit		
	3	Unit6: Working Principles of different types of power supplies viz. CVTs		
14	1	IC voltage regulators(78xx,79xx)	14	Op-Amp (IC 741) as inverting and non-inverting amplifier, adder Comparator, integrator and differentiator verify using p-spice
	2	Revision/Assignment of 6 th unit		
	3	Unit7: Operational Amplifier, differential amplifier		
15 th	1	Emitter coupled differential amplifier Offset even voltages and currents	15	To study the pin configuration and working of IC 555 and its use as mono stable and astable multi - vibrator
	2	Integrator and differentiator, Summer, Subtractor		
	3	Familiarization with specifications and pin configuration of IC 741		
16 th	1	Block diagram and operation of 555 IC timer	16	Internal Practical/viva-voice evaluation
	2	HSBTE old paper solution		
	3	HSBTE old paper solution		