

Name of faculty : Anita Rani

Subject : Electronics-II

Sem

: 3rd Electrical

Week	Lecture	Name of topic	Date	Experiment
1 st	1 st	Difference between voltage and power amplifiers, collector efficiency, distortion and dissipation capability		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 nd	Class A, Class B, Class AB, and Class C amplifiers		
	3 rd	Class A single-ended power amplifier, its working and collector efficiency		
2 nd	4 th	Impedance matching in a power amplifier using transformer		.To measure (a) optimum load (b) output power (c) signal handling capacity of a push-pull amplifier
	5 th	6 Heat sinks in power amplifiers, Push-pull amplifier		
	6 th	complementary symmetry push-pull amplifier.		
3 rd	7 th	Series resonant circuits and bandwidth of resonant circuits		.To measure (a) voltage gain (b) input and output impedance for an emitter follower circuit
	8 th	Series and parallel resonant circuits and bandwidth of resonant circuits		
	9 th	Single tuned voltage amplifiers and their frequency response characteristics		
4 th	10 th	double tuned voltage amplifiers and their frequency response characteristics and applications.		Revision and viva
	11 th	Feedback and its importance, positive and negative feedback and their need		
	12 th	expression for gain of an amplifier employing feedback		
5 th	13 th	Effect of feedback (negative) on gain, stability ,distortion and bandwidth of an amplifie rinput impedance and output impedance of amplifier.		To measure frequency generation in (a) Hartley (b) R-C Phase Shift oscillator
	14 th	Types of feedback circuit.		
	15 th	Revision		
6 th	16 th	Revision		To observe the differentiated and integrated square wave on a CRO for different values of R-C time constant
	17 th	Sessional Test		
	18 th	Effect of removing the emitter by-pass capacitor on a CE transistor amplifier		
7 th	19 th	Emitter follower and its application		Clipping of both portion of sine-wave using: a) diode and dc source b) /*zener diodes Clamping
	20 th	Sinusoidal Oscillators – positive feedback in amplifiers		

	21 st	.Difference between an oscillator and an alternator, Essentials of an oscillator		a sine-wave to: a) Negative dc voltage b) Positive dc voltage
8 th	22 nd	Circuit details and working of LC oscillators viz. Tuned Collector, Hartley and Colpitt's oscillators		Revision and Viva
	23 rd	R-C oscillator circuits, phase shift		
	24 th	Wein bridge oscillator circuits		
9 th	25 th	Introduction to piezoelectric crystal and crystal oscillator circuit		To generate square-wave using an astable multivibrator and to observe the wave form on a CRO and verify the result using p-spice software
	26 th	Concept of Wave-shaping , Wave-shaping circuits		
	27 th	R-C differentiating and integrating circuits		
10 th	28 th	Diode clipping circuits		To observe triggering and working of a bistable multivibrator circuit and observe its output wave form on a CRO
	29 th	Diode clamping circuits		
	30 th	Revision		
11 th	31 st	Sessional test		
	32 nd	Tutorial		
	33 rd	Tutorial		
12 th	34 th	Transistor as a switch (explanation using CE transistor characteristics) Collector coupled astable, monostable, bistable multivibrator circuits (explanation using wave shapes).		To use the op-Amp (IC 741) as inverting one and non-inverting amplifiers, adder, comparator, integrator and differentiator and verify the result using p-spice software
	35 th	Applications of wave-shaping circuits Brief mention of uses of multivibrators		
	36 th	Working and applications of transistor inverter circuit using power transistors		
13 th	37 th	Working Principles of different types of power supplies		To study the pin configuration and working of IC 555 and its use as monostable and astable multivibrator
	38 th	CVTs, IC voltage regulator (78 XX,79XX)		
	39 th	CVTs, IC voltage regulator (78 XX,79XX)		
14 th	40 th	The basic operational amplifier. The differential amplifier. The emitter coupled differential amplifier. Offset even voltages and currents		Revision and viva-voce
	41 st	Basic operational amplifier applications, integrator and differentiator, summer, subtractor		
	42 nd	Familiarization with specifications and pin configuration of IC 741		
15 th	43 rd	Block diagram and operation of 555 IC timer		Revision and viva-voce
	44 th	Revision		

	45 th	Sessional test		
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