

Government Polytechnic, Mandi Adampur				
Name of Faculty: Sh. Ravinder Kumar				
Discipline: Electronics				
Semester: 3				
Subject: Electronic Devices and Circuits				
Lesson Plan Duration: 18 Week				
Week	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
Week 1	Day 1	Unit 1: Multistage Amplifiers	day 1	Plot the frequency response of two stage RC coupled amplifier and calculate the
	Day 2	Need for multistage amplifier		
	Day 3	Gain of multistage amplifier		
Week 2	Day 4	Different types of multistage amplifier like RC coupled, transformer coupled,	day 2	File Check
	Day 5	direct coupled, and their frequency response and bandwidth		
	Day 6	Test Unit 1		
Week 3	Day 7	Unit 2: Large Signal Amplifier	day 3	To measure the gain of push-pull amplifier at 1KHz
	Day 8	Difference between voltage and power amplifiers		
	Day 9	Importance of impedance matching in amplifiers		
Week 4	Day 10	Class A, Class B, Class AB, and Class C amplifiers, collector efficiency	day 4	File Check
	Day 11	and Distortion in class A,B,C		
	Day 12	Single ended power amplifiers, Graphical method of calculation (without derivation) of out put power; heat dissipation curve and importance of heat sinks.		
Week5	Day 13	Push-pull amplifier, and complementary symmetry push-pull amplifier	day 5	To measure the voltage gain of emitter follower circuit and plot its frequency response
	Day 14	Test Unit 2		
	Day 15	Unit 3: Feedback in Amplifiers		
Week 6	Day 16	Basic principles and types of feedback	day 6	File Check
	Day 17	Derivation of expression for gain of an amplifier employing feedback		
	Day 18	Effect of feedback (negative) on gain, stability, distortion and bandwidth of an amplifier		
Week 7	Day 19	RC coupled amplifier with emitter bypass capacitor	day 7	Plot the frequency response curve of Hartley and Colpitt's Oscillator
	Day 20	Emitter follower amplifier and its application		
	Day 21	Test Unit 3		
Week 8	Day 22	Unit 4: Sinusoidal Oscillators	day 8	File Check

	Day 23	Use of positive feedback		
	Day 24	Barkhausen criterion for oscillations		
	Day 25	Different oscillator circuits-tuned collector, Hartley, Colpitts, phase shift,	day 9	Plot the frequency response curve of phase shift and Wein bridge Oscillator
	Day 26	Wien's bridge, and crystal oscillator		
	Day 27	Their working principles (no mathematical derivation but only simple numerical problems)		
Week 10	Day 28	Test Unit 4	day 10	File Check
	Day 29	Unit 5: Tuned Voltage Amplifiers		
	Day 30	Series and parallel resonant circuits		
Week 11	Day 31	and bandwidth of resonant circuits	day 11	Use of IC 555 as monostable multivibrator and observe the output for different values of RC
	Day 32	Single and double tuned voltage amplifiers and their frequency response characteristics		
	Day 33	Test Unit 5		
Week 12	Day 34	Unit 6: Multivibrator Circuits	day 12	File Check
	Day 35	Working principle of transistor as switch		
	Day 36	Concept of multi-vibrator: astable, monostable		
Week 13	Day 37	and bistable and their applications	day 13	Use of IC 555 as astable multivibrator and observe the output at different duty cycles
	Day 38	Block diagram of IC555 and its working and applications		
	Day 39	IC555 as monostable and astable multi-vibrator and bistable multivibrator		
Week 14	Day 40	Test Unit 6	day 14	File Check
	Day 41	Unit 7: Operational Amplifiers		
	Day 42	Characteristics of an ideal operational amplifier and its block diagram		
Week 15	Day 43	IC-741 and its pin configuration	day 15	To use IC 741 (op-amplifier) as i) Inverter, ii) Adder, iii) Subtractor iv) Integrator
	Day 44	Definition of differential voltage gain, CMRR, PSRR		
	Day 45	slew rate and input offset current		
Week 16	Day 46	Operational amplifier as an inverter, scale changer	day 16	File Check
	Day 47	adder, subtractor, differentiator, and integrator		
	Day 48	Test Unit 7		
Week 17	Day 49	Unit 8: Regulated DC Power Supplies	day 17	fixed voltage DC power supply using three terminal voltage regulator IC (7805, 7812, 7905)
	Day 50	Concept of DC power supply		
	Day 51	Line and load regulation		
Week 18	Day 52	Concept of fixed voltage, IC regulators (like 7805, 7905),	day 18	File Check

Day 53	and variable voltage regulator like (IC 723)		
Day 54	Test Unit 8		