

Department of Information Technology

3IT05 Analog and Digital Electronics

Teaching Plan

Lecture No.	Topic Taught
1.	UNIT-I Introduction to Analog Circuits:
2.	Transistor as an amplifier
3.	Need of biasing
4.	Potential divider bias circuit
5.	Faithful amplification of CE amplifier
6.	Transistor as an electronic switch
7.	Construction and working of JFET
8.	Examples
9.	UNIT-II Operational Amplifier: Block diagram of Op-Amp
10.	Ideal Op-Amp parameters
11.	Applications of op-amp: Inverting
12.	Applications of op-amp: Non-Inverting Amplifier
13.	Voltage follower
14.	Summing Amplifier
15.	Sub tractor
16.	Comparator
17.	Examples
18.	UNIT-III Wave Generators: Transistorized Oscillators: Barkhausen Criterion
19.	R-C Phase Shift Oscillator
20.	Transistor crystal oscillator
21.	Timer IC 555: Block diagram
22.	Timer IC 555: Working
23.	Astable multivibrator
24.	Monostable multivibrator
25.	Examples
26.	UNIT-IV Introduction to Digital Circuits: Logic gates
27.	Standard logic expression forms
28.	Sum of Product (SOP)
29.	Product of Sum (POS)
30.	Logic expression realization & minimization using K-map
31.	Two and Three variable K - Map
32.	Four variable K - Map
33.	Half Adder, Full Adder
34.	Half subtractor, Full subtractor
35.	Examples
36.	UNIT-V Logic Circuits: Difference between Combinational and Sequential circuits
37.	Code convertors - BCD
38.	Excess-3 and Gray Code Converter
39.	Multiplexers
40.	De-multiplexers and Decoders
41.	Flip Flops: SR flip-flop, JK flip-flop
42.	D flip-flop and T flip-flop
43.	Examples
44.	UNIT-VI Sequential Circuits: Difference between Asynchronous & Synchronous sequential circuits
45.	Asynchronous counters, Mod counter
46.	Up-Counter, Down-Counter
47.	Working of shift Registers, SISO, SIPO
48.	PISO and PIPO
49.	Application of Shift Register as a Ring Counter
50.	Examples