DELHI COLLEGE OF TECHNOLOGY & MANAGEMENT(DCTM), PALWAL	**INSTRUCTION PLAN**	**RECORD NO.: QF/ACD/009** **Revision No.: 00**

Name of Faculty: SWATI GAUR Department: ECE
Course Title: ELEMENTS OF ELECTRONICS ENGINEERING Course Number: EC-101C
Class & Semester – ME FIRST SEM Session: JAN-APRIL, 2018

Instruction Plan Details:

Lecture No.	Topics to be covered	References	Remarks
1.	Binary, Decimal, Octal and Hexadecimal number systems	R P Jain	**UNIT-2**
2.	Conversions (Decimal to binary, hexadecimal, octal and vice versa)		
3.	Conversions (Binary to octal and hexadecimal and vice versa) and octal to hexadecimal and vice versa.		
4.	Boolean Algebra, De Morgan's theorem		
5.	logic gates (AND, OR, NOT, NAND, NOR, XOR, XNOR)		
6.	Combinational and sequential circuits Introduction to flip-flops		
7.	(S-R & J-K Flip Flops		
8.	Overview of Semiconductors	A S Sedra and KC smith Sanjeev Gupta	**UNIT-1**
9.	PN junction diode		
10.	Diode circuits: rectifiers (bridge type only)		
11.	Clippers with numerical		
12.	Clampers with numerical		
13.	filters & Zener Diode		
14.	BJT construction, operation		
15.	characteristics (CB, CE and CC configurations) and uses		
16.	JFET construction, operation,		
17.	Relation between alpha, beta and gamma.		
18.	Characteristics (CS configuration) and uses		
19.	Role, importance and applications of general-purpose test instruments like Multimeter: Digital & Analog	Cooper	**UNIT-3**
20.	Role, importance and applications of CRO		

21.	Role, importance and applications of Signal/Function Generator	Sanjeev Gupta	
22.	Photoconductive cell		
23.	photovoltaic cell and solar cell	Cooper A K Sawhney	**Unit 4**
24.	photodiodes – phototransistors		
25.	Seven segment display: Common anode		
26.	Common cathode connections and applications.		
27.	LED DISPLAY: Construction,		
28	Working, Advantages, Disadvantages and Applications.		
29	LCD DISPLAY: Types of liquid crystals		
30	Types of LCD display:- Dynamic scattering and field effect type		
31	Construction, Working, Advantages, Disadvantages and Applications.		
32	Block diagram of a basic communication system	Singh & Sapre Sanjay Sharma	**Unit 5**
33.	frequency spectrum		
34.	need for modulation and methods of modulation		
35.	principles of AM		
36.	principles of FM		
37.	principles of PM		
38.	principles of pulse analog and pulse modulation		
39.	principles of pulse digital modulation		
40.	AM transmitters		
41.	AM receivers (block diagram description only)		
42.	FM transmitters (block diagram description only)		
43.	FM receivers (block diagram description only)		

Text / Reference Books:

1. Sedra A S and Smith K C, "Microelectronic Circuits" 4th Ed., New York, Oxford University Press, New York (1997).
2. Tocci R J and Widmer N S, "Digital Systems – Principles and Applications", 8th Ed. Pearson Education India, New Delhi (2001).
3. Cooper and Helfrick, "Modern Electronic Instrumentation and Measuring Techniques", 4th print Prentice Hall of India, New Delhi (1996)
4. Boylestad and Nashelsky, "Electronic Devices and Circuit Theory", 8th Ed, Pearson Education India, New Delhi (2002).
5. Millman and Grabel, "Microelectronics", 2nd Ed. Tata McGraw-Hill (1999).

Signature of Faculty Member **HOD/Principal/Academic Coordinator**