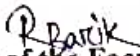


LESSON PLAN

Name of the Institute:		C. V. Raman Polytechnic
Department:		ELECTRONICS & TELECOMMUNICATION ENGINEERING
Semester/Division/Branch:		5 TH SEM/ETC
Subject Name with code:		VLSI & EMBEDDED SYSTEM(TH-2)
Total No. of Class (Required):		60
Faculty Name:		RASHMITA BARIK
Class No.	<i>Brief description of the Topic/Chapter to be taught</i>	Remarks
1	Historical prospective of MOS.	
2	Basic operation of MOSFET.	
3	Structer and Operation of MOSFET.	
4	MOSFET V-I charecteristics.	
5	MOSFET scaling and small geometry effect.	
6	MOSFET capacitance.	
7	Modelling of MOSFET, SPICE LEVEL-1, LEVEL-2 & LEVEL-3 Model.	
8	Doubt Clearing class for Chapter-2	
9	Doubt Clearing class for Chapter-2	
10	MOS fabrication process.	
11	N-MOS fabrication process.	
12	C-MOS fabrication process.	
13	MOS fabrication process by n-well on p-substrate.	
14	C-MOS fabrication process by p-well on n-substrate.	
15	Layout design rule.	
16	Stick Diagram of C-Mos.	

17	VLSI design methodology.	
18	Y-Chart.	
19	Doubt Clearing class for Chapter-3	
20	Doubt Clearing class for Chapter-3	
21	Basic n-MOS Characteristics.	
22	Description of Inverter with resistive load, active enhancement load.	
23	Active depletion n-MOS inverter.	
24	Details of c-MOS inverter with characteristics.	
25	Inverter design.	
26	Doubt Clearing class for Chapter-4	
27	Doubt Clearing class for Chapter-4	
28	Static logic.	
29	Static c-MOS logic circuit.	
30	XOR and XNOR c-MOS logic circuit.	
31	Complementary Pass Transistor logic(CPL)	
32	Dynamic logic and difference with static logic.	
33	High performance dynamic c-MOS circuit.	
34	D-RAM,S-RAM and Flash Memory.	
35	SR Flipflop.	
36	Clocked SR- Flipflop and D-Latch.	
37	Design language of SPL & HDL.Explanation of HDL & EDA tools.	
38	Design strategy and concept of FPGA.Design flow using VHDL and Package Xilinx.	
39	RTL, Gate Level Language	
40	VHDL using CPLD or FPGA	
41	Basic VLSI Testing.	
42	Simulation at various level including timing verification , faults models.	
43	Doubt Clearing class.	

44	Doubt Clearing class.	
45	Embedded Systems Overview,list of embedded systems	
46	Characteristics of embeded System ,example – A DigitalCamera	
47	Embedded Systems Technologies--Technology – Definition	
48	Technology for Embedded Systems- Processor Technology-IC Technology	
49	Design Technology-Processor Technology,General Purpose Processors – Software, Basic Architecture of Single Purpose Processors – Hardware	
50	Design Technology-Processor Technology,General Purpose Processors – Software, Basic Architecture of Single Purpose Processors – Hardware	
51	Application – Specific Processors,Microcontrollers,Digital Signal Processors(DSP)	
52	Application – Specific Processors,Microcontrollers,Digital Signal Processors(DSP)	
53	IC Technology- Full Custom / VLSI,	
54	IC Technology- Full Custom / VLSI,	
55	Semi-Custom ASIC (Gate Array & Standard Cell), PLD (Programmable Logic Device)	
56	Semi-Custom ASIC (Gate Array & Standard Cell), PLD (Programmable Logic Device)	
57	Basic idea of Arduino micro controller	
58	Doubt Clearing class.	
59	Doubt Clearing class.	
60	Revision and Doubt clearing class	


Signature of the Faculty


Signature of the H.O.D