

Bhoj Reddy Engineering College for Women: Hyderabad
Department of Information Technology
Lesson plan of faculty member for the academic year 2016–17

Class: II B Tech

Branch- Section: IT- A

Semester: I

Subject: Digital Logic Design and Computer Organization

Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT- I: Basic Structure of Computers		
1	Computer Types, Functional units	13 June 2016
2	Basic operational concepts, Bus structures	14 June 2016
3	Software, Performance	15 June 2016
4	Multiprocessors and multicomputers, Computer Generations	18 June 2016
5	Tutorial(G3,G2,G1)-Computer Functional units, generations	13, 14, 15 June 2016
6	Floating – Point Representation	20 June 2016
7	Number base conversions, Octal and Hexadecimal Numbers	21 June 2016
8	Complements	22 June 2016
9	Signed binary numbers	25 June 2016
10	Tutorial(G3,G2,G1)-Number base conversions	20, 21, 22 June 2016
11	Binary codes	27 June 2016
UNIT-II : Digital Logic Circuits		
12	Basic Logic Functions, Logic gates, universal logic gates	28 June 2016
13	Minimization of Logic expressions.	29 June 2016
14	K-Maps 2var,3var	30 June 2016
15	Tutorial(G3,G2,G1)-Kmaps,Minimization	28, 29,30 June 2016
16	4 var,5var K-Maps	02 July 2016
17	Registers, Shift Registers	04,July 2016
18	Binary counters, Multiplexers	05 July 2016
19	Tutorial-(G3,G2,G1)-Binary counters, Multiplexers	02,04,05 July 2016
20	5var K-Maps	11 July 2016
21	Multiplexers	12 July 2016
22	Programmable Logic Devices.	13 July 2016
23	Decoders	16 July 2016
24	Tutorial (G3, G2, G1)- Programmable Logic Devices.	11, 12, 13 July 2016
UNIT- III: Computer Arithmetic		
25	Algorithms for fixed point addition	18 July 2016
26	Algorithms for fixed point subtraction, multiplication	19 July 2016
27	Algorithms for fixed point division	20 July 2016
28	Algorithms for floating point addition	23 July 2016
29	Tutorial(G3,G2,G1)- Algorithms	18, 19, 20 July 2016
30	Algorithms for floating point subtraction, multiplication	25 July 2016
31	Algorithms for floating point division	26 July 2016
32	Hardware Implementation of ALU operations, High performance arithmetic	27 July 2016
33	Hardware Implementation of ALU operations, High performance arithmetic	30 July 2016
34	Tutorial(G3,G2,G1)-High performance arithmetic	25, 26, 27 July 2016
35	Instruction Set & Addressing: Memory Locations and Addresses, Machine addresses and sequencing	02 August 2016
36	Various Addressing Modes	03 August 2016
37	Tutorial(G3,G2)-Addressing Modes	02, 03 August 2016
38	Instruction Formats	16 August 2016
39	Basic Machine Instructions	17 August 2016
40	IA-32 Pentium example - shift operations, arithmetic operations	20 August 2016
41	Tutorial(G3,G2)-A-32 Pentium example	16, 17 August 2016

42	IA-32 Pentium example - Rotate operations	22 August 2016
UNIT- IV: Processor Organization		
43	Introduction to CPU	23 August 2016
44	Execution of Instructions	24 August 2016
45	Register Transfers	27 August 2016
46	Tutorial(G3, G2, G1)- Rotate operations, Execution of instructions	22, 23,24 August 2016
47	ALU transfers	29 August 2016
48	Single bus organization	30 August 2016
49	Multiple Bus Organization	31 August 2016
50	Hardwired Control	03 September 2016
51	Tutorial(G3, G2, G1)-Execution of Instructions	29, 30,31 August 2016
52	Micro programmed control	06 September 2016
53	Memory Organization: Concept of Memory	07 September 2016
54	Micro programmed control	10 September 2016
55	Tutorial(G3,G2)-Hardwired Control	06, 07 September 2016
56	RAM memories, Types of RAMS	13 September 2016
57	ROM memories, Types of ROMS	14 September 2016
58	memory hierarchy	17 September 2016
59	Tutorial(G3,G2)-Micro programmed control	13, 14 September 2016
60	cache memories	19 September 2016
61	Virtual memory	20 September 2016
62	Secondary storage memory management requirements.	21 September 2016
UNIT- V :Input / Output Organization		
63	Introduction to I/O	24 September 2016
64	Tutorial(G3,G2,G1)-Memory hierarchy	19, 20, 21 September 2016
65	Interrupts	26 September 2016
66	Interrupts- Hardware	27 September 2016
67	Enabling Interrupts	28 September 2016
68	Disabling Interrupts	01 October 2016
69	Tutorial(G3,G2,G1)-Interrupts ,Enabling Interrupts	26, 27,28 September 2016
70	Device Control	03 October 2016
71	Direct Memory Access, Handling Interrupts	04 October 2016
72	Tutorial-(G3,G2) Handling Interrupts	03,04 October 2016
73	Buses, standard I/O Interfaces., standard I/O Interfaces.	29 October 2016
74	DMA structure, Interface circuits	31 October 2016
75	Tutorial-(G1) DMA Structure	31 October 2016
76	Direct Memory Access	01 November 2016
77	Direct Memory Access	03 November 2016
78	Tutorial-(G3,G1)-Imp questions	01, 03 November 2016

Text books:

1. Computer Organization-Carl Hamcher, Zvonko Vranesic,fifth edition, McGraw Hill (I,IV,V Units).
2. Digital Design-Third Edition,M.Morris Mano,Pearson Education(II,III Units)

Name and signature of the faculty: M.Srividya - - - -

Name and signature of Head of the Department: G.Srinivasa Rao - - - -