Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information Technology

Lesson plan of faculty member for the academic year 2016–17

Class: III B Tech Branch-Section: ECE-C Semester: I

Subject: Computer Organization and Operating Systems Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Basic Structure of Computers		
1	Evolving role of software, Changing Nature of Software	13 June 2016
2	Functional Unit, Basic Operational Concepts	16 June 2016
3	Bus Structures, Software Performances	17 June 2016
4	Multiprocessors & Multi Computers	18 June 2016
5	Tutorial(G1, G2, G3): Functional units	14, 17, 18 June 2016
6	Data Representation	20 June 2016
7	Fixed Point, Floating-Point Representation	23 June 2016
8	Register Transfer Language ,Bus and memory transfer	24 June 2016
9	Arithmetic Micro Operations	25 June 2016
10	Tutorial(G1, G2, G3): representation of data	21, 24, 25 June 2016
11	Logic Micro Operations, Shift Micro Operations	27 June 2016
12	Arithmetic Logic Micro Shift Unit, Instruction Codes	30 June 2016
13	Computer Registers	1 July 2016
14	Computer Instruction Cycle	2 July 2016
15	Tutorial(G1, G2, G3): instruction codes	28 June, 1, 2 July 2016
16	Memory - Reference Instructions, Input - Output and Interrupt,	4 July 2016
17	STACK Organization, Instruction Formats	8 July 2016
18	Addressing Modes, DATA Transfer and Manipulation	9 July 2016
19	Program Control, Reduced Instruction Set Computer.	11 July 2016
20	Tutorial(G1, G2, G3): Data Manipulation	5, 8, 9 July 2016
UNIT-II : Micro Programmed Control		
21	Control Memory, Access Sequencing	14 July 2016
22	Micro Program Examples	15 July 2016
23	Design of Control Unit	16 July 2016
24	Hard-wired & Micro Programmed Control	18 July 2016
25	Tutorial(G1, G2, G3): stack organization	12, 15, 16 July 2016
26	Memory System: RAM & ROM Memories	21 July 2016
27	Cache Memories Performance Considerations	22 July 2016
28	Virtual, Secondary Storage	23 July 2016
29	Introduction to RAID	25 July 2016
30	Tutorial(G1, G2, G3):hard wired control	19, 22, 23 July 2016
UNIT-III : Input – Output Organization		
31	Peripheral Devices	28 July 2016
32	Input Interface	29 July 2016
33	Output Interface	30 July 2016
34	Data Transfer Modes	4 August 2016
35	Tutorial (G1, G2, G3) : input output interface	26, 29, 30 July 2016
36	Priority Interrupts	5 August 2016
37	Direct Memory Access	6 August 2016
38	Input- Output Processor	18 August 2016
39	Serial Communication	19 August 2016
40	Tutorial (G1, G2, G3) : direct memory access	2, 5, 6 August 2016
41	Peripheral Components	20 August 2016
42	Interconnect PCI Bus	22 August 2016
43	Standard Protocols	26 August 2016

44	RS232, USB, IEEE1394	27 August 2016
45	Tutorial (G1, G2, G3) : standard protocols	23, 26, 27 August 2016
UNIT-IV: Operating System Overview		
46	Overview of Computer Operating Systems	29 August 2016
47	OS Functions, Protection and Security	1 September 2016
48	Special Purpose Systems, Structured OS Services	2 September 2016
49	System Calls, System Programs, OS Generations	3 September 2016
50	Tutorial (G1, G2, G3) : protection and security	27 August, 2, 3 September 2016
51	Memory Management : Swapping	5 September 2016
52	Memory Allocation, Paging, Page Table	8 September 2016
53	Segmentation, Virtual Memory	9 September 2016
54	Demand Paging	10 September 2016
55	Tutorial (G1, G2, G3) : swapping	6, 9, 10 September 2016
56	Page Replacement Algorithms	12 September 2016
57	Allocation of Frames	15 September 2016
58	Thrashing Case Study	16 September 2016
59	Deadlock: System Model	17 September 2016
60	Tutorial (G1, G2, G3) : segmentation	13, 16, 17 September 2016
61	Deadlock Characterization	19 September 2016
62	Deadlock Prevention	22 September 2016
63	Detection and Avoidance	23 September 2016
64	Recovery from Deadlock	24 September 2016
65	Tutorial (G1, G2, G3) : deadlock situation	20, 23, 24 September 2016
UNIT-V: File System Interface		
66	Concept of File	26 September 2016
67	File Access Methods	29 September 2016
68	Directory Structure, FS Mounting	1 October 2016
69	File Sharing	3 October 2016
70	Tutorial (G1, G3) : file accessing methods	27 September, 1 October 2016
71	File Protection	27 October 2016
72	FS Implementation ,FS Structure	28 October 2016
73	Directory Implementation	29 October 2016
74	Allocation Methods, Free Space Management	31 October 2016
75	Tutorial (G2, G3) : File structure	28, 29 October 2016
76	Previous Question papers discussion	3 November 2016

Text books:

1. Computer Organization – Carl hamacher, Zvonks Vranesic, Saleazky, 5th Edition, McGraw Hill.
2. Computer System Architecture – M Moris mano, 3rd Edition, Pearson
3. Operating System Concepts – Abraham Silberchatz, Peter B. Galvin, Greg Gagne, 8th Edition, John Wiley.

Name and signature of the faculty: S.Revathi ----

Name and signature of Head of the Department: Mrs N Shribala ----