

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information and Technology

Lesson plan of Faculty member for the academic year 2020–2021

Class: II B Tech

Branch-Section: IT-A

Semester: I

Subject: Computer Organization and Microprocessor

Lectures per week: 3 (Hrs)

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Digital Computer and Basic Computer Organization and Design, Micro Programmed Control		
1	Introduction and Definition	2 September 2020
2	Block diagram of Digital Computer, Computer Organization	4 September 2020
3	Computer Design, Computer Architecture	7 September 2020
4	Instruction codes, Computer Registers	9 September 2020
5	Computer instructions, Timing and Control	11 September 2020
6	Instruction cycle	14 September 2020
7	Memory Reference Instructions	16 September 2020
8	Input - Output and Interrupt	18 September 2020
9	Complete Computer Description	21 September 2020
10	Control memory, Address sequencing	23 September 2020
11	micro program example,	25 September 2020
12	design of control unit	28 September 2020
UNIT-II: Central Processing Unit		
13	The 8086 Processor Architecture	30 September 2020
14	Register organization, Physical memory organization	5 October 2020
15	General Bus Operation	7 October 2020
16	I/O Addressing Capability, Special Processor Activities	9 October 2020
17	Minimum and Maximum mode system and timings	12 October 2020
18	Machine language instruction formats	14 October 2020
19	Addressing modes, Instruction set of 8086	16 October 2020
20	Assembler directives, Operators	26 October 2020
UNIT-III: Assembly Language Programming with 8086		
21	Machine level programs	28 October 2020
22	Machine coding the programs	9 November 2020
23	Programming with an assembler	11 November 2020
24	Assembly Language example programs	13 November 2020
25	Stack structure of 8086	16 November 2020
26	Interrupts and Interrupt service routines	18 November 2020
27	Interrupt cycle of 8086	20 November 2020
28	Interrupt programming	23 November 2020
29	Passing parameters to procedures	25 November 2020
30	Macros, Timings and Delays	27 November 2020
UNIT-IV: Computer Arithmetic		
31	Introduction, Addition and Subtraction	2 December 2020
32	Multiplication Algorithms, Division Algorithms	4 December 2020
33	Floating – point Arithmetic operations	7 December 2020
34	Peripheral Devices, Input-Output Interface, Asynchronous data transfer	9 December 2020
35	Modes of Transfer, Priority Interrupt, Direct memory Access,	11 December 2020
36	Input –Output Processor (IOP), Intel 8089 IOP	14 December 2020
UNIT-V: Memory Organization, Pipeline and Vector Processing, Multi Processors		
37	Memory Hierarchy, Main Memory, Auxiliary memory, Associate Memory,	16 December 2020
38	Cache Memory, Parallel Processing,	18 December 2020
39	Arithmetic Pipeline, Instruction Pipeline, RISC Pipeline	21 December 2020
40	Vector Processing, Characteristics of Multiprocessors	23 December 2020

41	Array Processor Interconnection Structures, Inter processor arbitration	28 December 2020
42	Inter processor communication, Inter processor synchronization	30 December 2020
43	Revision	2 January 2021

Text books:

1. Computer System Architecture, M. Moris Mano, Third Edition, Pearson. (UNIST-I, IV , V)
2. Advanced Microprocessors and Peripherals, K M Bhurchandi, A.K Ray ,3rd edition, McGraw Hill India Education Private Ltd. (UNITS - II, III).

Reference books:

1. Microprocessors and Interfacing, D V Hall, SSSP Rao, 3rd edition, McGraw Hill India Education Private Ltd.
2. Carl Hamacher, Zvonko Vranesic, Safwat Zaky: Computer Organization, 5th Edition, Tata McGraw Hill, 2002.
3. Computer Organization and Architecture, William Stallings, 9th Edition, Pearson.
4. David A. Patterson, John L. Hennessy: Computer Organization and Design – The Hardware / Software Interface ARM Edition, 4th Edition, Elsevier, 2009.

Name and signature of the faculty: Suhasini T S ----

Name and signature of Head of the Department: C Murugamani ----