

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Electronics and Communication Engineering

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

Class: III B Tech

Branch-Section: ECE-A

Semester: II

Subject: Microprocessor and Microcontroller

Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
Unit-I: 8086 Architecture		
1	Introduction	9 December 2016
2	Introduction to 8086 Microprocessor	10 December 2016
3	Tutorial(G1) Address line calculation	9 December 2016
4	Memory Segmentation	14 December 2016
5	8086 Functional diagram, Register Organization	16 December 2016
6	Programming Model	17 December 2016
7	Tutorial (G3, G1) Memory addresses	15,16 December 2016
8	Architecture of 8086	19 December 2016
9	Physical Memory organization	21 December 2016
10	Architecture of 8086, Common function signals	23 December 2016
11	Interrupts of 8086	24 December 2016
12	Tutorial (G2, G3, G1) Architecture of 8086	19,22,23 December 2016
13	Minimum mode signals & Timing diagrams	28 December 2016
14	Maximum mode signals & Timing diagrams	30 December 2016
15	Signal description of 8086, Common function signals	31 December 2016
16	Tutorial (G2, G3, G1) Pin diagram, Signal description of 8086	29,30 December 2016
Unit-II: Instruction Set & Assembly Language Programming Of 8086		
17	Instruction set	2 January 2017
18	Instruction Formats	4 January 2017
19	Instruction set	6 January 2017
20	Programs using Instruction set	7 January 2017
21	Tutorial (G2, G3, G1) Assembler directives	2,5,6 January 2017
22	Procedures	9 January 2017
23	Simple Programs	11 January 2017
24	Tutorial (G3, G2, G1) Programs using Instruction set	9,12 January 2017
25	Macros	16 January 2017
26	Programs using Instruction set	18 January 2017
Unit-III: I/O Interface, Interfacing with Advanced Devices & Communication Interface		
27	8255 Block diagram	20 January 2017
28	Various modes of operation and interfacing to 8086	21 January 2017
29	Tutorial (G2, G3, G1) Interfacing program	16,19,20 January 2017
30	Interfacing keyboard program	23 January 2017
31	Interfacing Display	25 January 2017
32	Tutorial (G2, G3, G1) Interfacing Stepper motor	27 January 2017
33	Interfacing D/A Converter	23,26,27 January 2017
34	Interfacing A/D converter	20 February 2017
35	Memory Interfacing	22 February 2017
36	Tutorial (G2, G3, G1) Memory Interfacing to 8086	25 February 2017
37	Memory Interfacing to 8086	20,23,24 February 2017
38	Interrupt structure of 8086	27 February 2017
39	Interrupt structure of 8086	1 March 2017

40	Memory Interfacing	3 March 2017
41	Vector interrupt table	4 March 2017
42	Tutorial (G2, G3, G1) Interrupt service routine	27 February 2,3 March 2017
43	Serial communication standards	6 March 2017
44	Serial data Transfer schemes	8 March 2017
45	ADC and DAC	10 March 2017
46	8251 architectures	11 March 2017
47	Tutorial (G2, G3, G1) 8251 interfacing	6,9,10 March 2017
Unit-IV: Introduction to Microcontrollers		
48	Overview of 8051 Microcontroller	13 March 2017
49	8051 Architecture	15 March 2017
50	I/O ports	17 March 2017
51	8051 Architecture	18 March 2017
52	Tutorial (G2, G3, G1) 8251 architectures	13,16,17 March 2017
53	Memory Organization	20 March 2017
54	Addressing Modes	22 March 2017
55	8051 pin configuration	24 March 2017
56	Instruction set	25 March 2017
57	Tutorial (G2, G3, G1) ports	20,23,24 March 2017
58	Instruction set	27 March 2017
59	Instruction set, Simple programs	31 March 2017
60	simple programs	1 April 2017
61	Tutorial (G2, G3, G1) simple programs	27,30 March 2017,1 April 2017
Unit-V: 8051 Real Time Control		
62	Programming Timer Interrupts	3 April 2017
63	Programming hardware Interrupts	7 April 2017
64	Programming Serial Communication Interrupts	8 April 2017
65	Tutorial (G2, G3, G1) Programming 8051 Timer and counters	3,6,7 April 2017
66	Serial Communication	10 April 2017
67	Serial Communication programs	12 April 2017
68	Timer and counters	13 April 2017
69	Tutorial (G2, G3, G1) Serial Communication programs	10,13 April 2017

Text books:

1. D.V. Hall, Microprocessor and Interfacing, TMGH 2nd edition 2006 (Unit 1 to 3)
2. Kenneth J. Ayala. The 8051 microcontroller, 3rd edition Cengage learning ,2010 (Unit 4 & 5)

Name and signature of the faculty: Mr M Krishna Chaithanya ----

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