

	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT	
	Department: Electronics and Communication Engineering (ECE)	Session: Jan-July 18
Branch/Sem: ECE / EE 6 th Subject Name & Code: Microcontroller & Embedded System Design & EE-312-F		
Lesson Plan		TEACHER: Mr. Satish Kumar

Books Referred:

- A - Design with PIC Microcontrollers by John B. Peatman , Pearson
- B – Prepared - Notes
- C – The 8051 microcontroller and Embedded Systems by M. Ali Mazidi
- D – Downloaded E-Books

Lecture No.	Topics to be covered
1	SECTION A: Brief Introduction about microcontroller. Different types of microcontrollers: Embedded microcontrollers,
2.	External memory microcontrollers; Processor Architectures: Harvard V/S Princeton,
3	CISC V/S RISC Architectures
4	Microcontroller's memory types; microcontroller's features: clocking, i/o pins,.
5-6	Interrupts, timers, peripherals
7	SECTION C : Microcontroller 8051- Architecture, Pin Diagram
8	I/O Ports.
9	Internal RAM and Registers,
10	Interrupts, Addressing Modes
11	Memory Organization and External Addressing
12	Instruction Set, Assembly Language Programming
13-14	Real Time Applications of Microcontroller- Interfacing with LCD
15-16	ADC, DAC Interfacing with 8051
17	Stepper Motor, Key Board Interfacing
18	Sensors interfacing
19	Section B: Introduction to PIC microcontrollers,

20	Architecture and pipelining, program memory considerations,
21	Addressing modes, CPU registers
22	Instruction set, simple operations.
23	SECTION D : -Introduction, Classification of Embedded System
24	Processors, Hardware Units,
25	Software Embedded into System
26	Applications and Products of Embedded Systems,
27	Structural Units in Processor, Memory Devices
28-29	I/O Devices, Buses, Interfacing of Processor Memory and I/O Devices,
30	Case Study of an Embedded System for a Smart Card.