Faculty Name: MANISH PANCHAL **Course Code: EC 35008**

Course Name: MICROPROCESSOR AND MICROCONTROLLER

Year: 2024-25 **Semester A**

Lecture No.	Topic Covered	Remark
1.	Overview of microprocessor and microcontroller with their development generation.	
2.	Architecture of 8085 microprocessor- concept of buses	
3.	Architecture of 8085 microprocessor- Registers and register pairs, control unit	
4.	Architecture of 8085 microprocessor- Accumulator and its related operations. Flags	
5.	Need of memory and their internal architecture. Basic memory interfacing concept	
6.	Assembly language instructions of 8085	
7.	Advanced assembly language instructions of 8085	
8.	Assembly language programming techniques, Stack subroutine	
9.	Architecture of 8086 microprocessor- concept of buses	
10.	Architecture of 8086 microprocessor- Registers and register pairs, control unit	
11.	Architecture of 8086 microprocessor- Accumulator and its related operations. Flags	
12.	Assembly language instructions of 8086	
13.	Advanced assembly language instructions of 8086	
14.	Memory interfacing concepts with 8085 and 8086 microprocessor	
15.	Input and output devices interfacing concepts with 8085 and 8086 microprocessors.	
16.	Real time devices interfacing concepts with 8085 and 8086 microprocessor.	
17.	Comparative operation of interrupt mechanism of 8085 and 8086 microprocessor.	
18.	Internal architecture of 8051 microcontroller	
19.	Special functions registers and their selections procedure.	
20.	Internal memory access technique of 8051 for a particular operation	
21.	Assembly language instructions of 8051 microcontroller	

	and programming techniques	
22.	Timers and counter sections of 8051 microcontroller and its initialization procedure	
23.	Interfacing of 8051 microcontroller with ADC and DAC	
24.	Interfacing of 8051 microcontroller with external memory	
25.	Interfacing of 8051 microcontroller with DC & stepper motor	
26.	Interfacing of 8051 microcontroller with seven segment display	
27.	Need for programmable interface devices and programmable peripheral interfaces with processor	
28.	Internal architecture of PID 8155 and discussion about their control and status words	
29.	Internal architecture of PPI 8255 and discussion about their control and status words	
30.	Timer unit and internal operation of PID 8155	
31.	Real time application design with PID 8155	
32.	Traffic light controller mechanism with PPI 8255	