MICROPROCESSOR

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
IV		SB Practical – 2	2	30	0	0	2	30	2

COURSE OBJECTIVE

- This practical helps to introduce the students with the architecture and operation of typical microprocessors and microcontrollers.
- To familiarize the students with the programming and interfacing of microprocessors and microcontrollers.
- To provide strong foundation for designing real world applications using microprocessors and microcontrollers.

COURSE OUTCOME

On successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Learn basic knowledge of microprocessor	**K1**
CO2	Acquire technical knowledge and perform specific technical tools,	**K2**
CO3	Understands the basic concept of OPCODE	**K3**
CO4	Use Microprocessor to perform logical and arithmetic operations	**K3**
CO5	Create controls for digit transactions programs	**K4**

Knowledge Level – K1-Remember, K2-Understand, K3-Apply, K4-Analye

MAPPING WITH PROGRAMME OUTCOME

COS	PO 1	PO2	PO3	PO4	PO5	PO6
CO1	M	M	M	M	L	L
CO2	M	M	S	M	M	M
CO3	S	S	S	S	M	S
CO4	S	S	S	S	S	S
CO5	S	S	S	S	S	S

S – Strong ***M – Medium*** ***L – Low***

SYLLABUS

UNIT I – Basics of Microprocessor **6 hrs**

Introduction – 8085 Programming model – Instruction Classification – Instruction word size – OP code format.

UNIT II – Addressing Modes **6 hrs**

Write, Assemble and Execute a Simple Program – Addressing Modes

UNIT III – 8085 Instruction Set **6 hrs**

8085 Instruction Set – Data Transfer Instructions – Arithmetic Instruction – Logic and Bit Manipulation Instructions – Branch Instructions – Machine Control Instructions.

UNIT IV – Microprocessor Architechture **6 hrs**

Microprocessor Architecture and its Operations.

UNIT V – Counters And Stack **6 hrs**

Counters and Time Delays – Stack and Subroutin

MICROPROCESSOR LAB

1. 8 Bit Addition
2. 16 Bit Addition
3. 8 Bit Multiply
4. 8 Bit Division
5. BCD Addition
6. 8 Bit Subtraction
7. Arranging In Ascending Order
8. 1's Complement
9. 2's Complement
10. Arrange In Descending Order
11. Block Move
12. Binary To ASCII
13. ASCII To Binary
14. ASCII To BCD
15. BCD To ASCII

TEXT BOOKS

S.No	Authors	Title	Publishers	Year of Publication
1.	Ramesh Gaonkar	Microprocessor Architecture, Programming and Applications with the 8085	Penram International Publishing (India) Pvt Ltd Fifth Edition.	2010

REFERENCE BOOKS

S.No	Authors	Title	Publishers	Year of publication
1	Soumitra Kumar Mandal	Microprocessors and Microcontrollers Architecture, Programming and Interfacing Using 8085,8086 and 8051	Penram International Publishing (India) Pvt LtdFirst Edition.	2011
2	Liu and Gibson	Microprocessor System the 8086 /8088 Family	Prentice hall	2011
3	R S Gaonkar	Microprocessor, Architecture, Programming and Application	Prentice hall	2012
4	Barry B. Brey	The Intel Microproessors	Mc.Graw Hill Publications	2013
5	Mohammed Ali Mazidi, Janice Gillispie Mazidi, Rolin D. McKinlay	8051 Microcontroller and Embedded Systems:Using Assembly and C	Pearson Education	2011

6	M.Saravanan, N.Senthil Kumar, S.Jeevananthan	Microprocessors and Microcontrollers	Pearson Education	2010
7	A.P. Godse, D.A.Godse	Microprocessor	Technical Publications	2010
8	John Crisp	Introduction to Microprocessors and Microcontrollers	Elsevier	2005

WEB RESOURCES

1. https://docs.microsoft.com/en-us/microprocessor/tutorials
2. https://www.tutorialspoint.com/microprocessor/microprocessor_overview.html
3. https://www.geeksforgeeks.org/introduction-of-microprocessor/

TEACHING METHODOLOGY

- Class room teaching.
- Group discussions
- Seminars
- Demo using systems
- Chart/Assignment

SYLLABUS DESIGNERS

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