

B.B. HEGDE FIRST GRADE COLLEGE, KUNDAPURA.

Department of Computer Science

Lesson Plan: 2017-2018 (I Term)

Subject & Code	Teacher	Class & Semester	Date
MICROPROCESSORS BCA302	Mrs. Vanitha .G	II B.C.A - III Sem	20-6-2017

Chapter	Objectives	Methodology/Instructional techniques	Students learning points
UNIT1: INTRODUCTION AND ARCHITECTURE OF 8086	<p>To understand about 8086 microprocessor and its data formats.</p> <p>Internal microprocessor architecture and different types of registers and flags, assembler directives used in programming.</p>	<p>Lecturing</p> <p>Chalk and Talk method</p>	<p>Meaning, Different Data Formats, Architecture, Different Registers and its functions, Flags, Assembler directives.</p>
UNIT2: ADDRESSING MODES	<p>To know about different addressing modes with examples, various types of Data Movement , Stack memory addressing and String Instructions.</p> <p>To understand about segment override prefix.</p>	<p>Lecturing method</p> <p>Chalk and talk method</p>	<p>Different addressing modes with examples. Program memory addressing modes, Stack memory-addressing modes, segment override prefix. MOV instruction, string data transfer instructions.</p>

<p>UNIT 3:</p> <p>INSTRUCTION SETS</p>	<p>To learn about different data transfer instructions with structure and its examples and also loop, Do-while and Repeat loops in MASM 6.x.</p>	<p>Lecturing method Chalk and talk method</p>	<p>Miscellaneous data transfer instructions, Arithmetic and Logic instructions and Branching instructions. BCD and ASCII arithmetic, Basic logic instructions, Shift and Rotate, String comparison instructions. Jump - various types , Loop, Do-while and Repeat until loops.</p>
<p>UNIT 4</p> <p>PROCEDURES INTERRUPTS AND MICROCONTROLLERS</p>	<p>To know about the procedures, interrupts. To understand the overview of microcontrollers.</p>	<p>Lecturing method Chalk and talk method</p>	<p>Procedures and parameter passing CALL and RET Instructions. interrupt vectors, WAIT, HLT, NOP, LOCK, ESC, BOUND, ENTER and LEAVE. Microcontrollers.</p>

REQUIREMENTS:
BLACKBOARD

TEXT BOOKS:

1. Barry B. Brey, Intel Microprocessors, 6th edition, PHI.
2. KR Venugopal and Rajkumar, Microprocessor X86 programming, BPB publications.
3. Udayashankar, et al, Microcontroller, Tata McGraw Hill

BOOKS FOR REFERENCE:

1. David E Goldberg Jacqueline, Schaum's Outline of Theory and Problems of Programming With Assembly Language, Mcgraw-Hill
2. D.V.Hall, Microprocessors and Interfacing, Tata McGraw Hill.
3. Yu Cheng Liu and Glen A. Gibson, Microcomputer systems: The 8086/8088 family – architecture, programming, PHI


E-RESOURCES

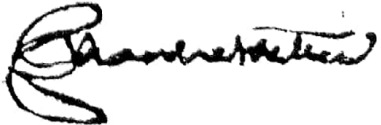
1. <https://www.youtube.com/watch?v=jMnuQMYR3Ro>
2. <https://www.youtube.com/watch?v=uFBNf7F3l60>
3. <https://www.youtube.com/watch?v=CiB0TOPjZyg&list=PL8pd8Qy1uoSl8pKPK53G9x7epPM8UO6VZ>
4. <https://www.youtube.com/watch?v=nWf0LXoqQ>
5. https://www.tutorialspoint.com/microprocessor/microprocessor_8086_overview.htm

NOTES:

8086 Microprocessor is an enhanced version of 8085 Microprocessor that was designed by Intel in 1976. It is a 16-bit Microprocessor having 20 address lines and 16 data lines that provides up to 1MB storage. It consists of powerful instruction set, which provides operations like multiplication and division easily. **Interrupt** is the method of creating a temporary halt during program execution and allows peripheral devices to access the microprocessor. The microprocessor responds to that interrupt with an **ISR** (Interrupt Service Routine), which is a short program to instruct the microprocessor on how to handle the interrupt. **Addressing modes** are an aspect of the instruction set architecture in most central processing unit (CPU) designs. The various addressing modes that are defined in a given instruction set architecture define how the machine language instructions in that architecture identify the operand(s) of each instruction. An addressing mode specifies how to calculate the effective memory address of an operand by using information held in registers and/or constants contained within a machine instruction or elsewhere.


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