15CS44: MICROPROCESSORS AND MICROCONTROLLERS

QUESTION BANK

MODULE-1

1. Define a microprocessor. Explain in detail the evolution of microprocessor from 4004 MP to core-2 system.
2. Explain in detail with a neat figure the working of the internal architecture of the 8086MP.
3. Draw and discuss the Register Organization of 8086.
4. What is real mode addressing? Explain default segment and offset registers.
5. Briefly explain various multipurpose registers in 8086.
6. Discuss the functions of segment registers of 8086 with examples. Give some advantages of memory segmentation.
7. Explain the flags of 8086 processors using suitable examples
8. What is pipelining? How is it achieved in 8086?
9. What do you mean by segment override prefix?
10. Explain Logical Address, Offset & Physical Address.
11. Explain Memory Map of IBM PC.
12. Show how the Flag register is affected by

    MOV AX, 34F5H

    ADD AX,95EBH
13. Discuss the different addressing modes with examples:
14. Differentiate between short, near and far jump instructions with two examples of each.
15. Discuss Conditional Jump Instructions.
16. Identify the addressing modes of the following instructions and explain them briefly:
    i. MOV WORD PTR [SI], 20H
    ii. MOV ES: [1000H], 10H
    iii. MOV CX, NUM [BX + DI]
17. Explain with an example, why and how a 20-bit address is generated in 8086.
18. What are assembler directives? Explain with examples the following assembler directives
    i. DQ
    ii. PROC and ENDP
    iii. TYPE
    iv. EVEN.
    v. PTR
    vi. ORG
    vii. DW
    viii. ASSUME
    ix. DUP
19. Demonstrate an assembly language program to reverse a given string and verify whether it is a palindrome or not. Display the appropriate message.
20. Demonstrate an assembly language program to read the current time and Date from the system and display it in the standard format on the screen.