

Regulation 2008

V SEMESTER

Duration : 3 Hrs.

Max. Marks: 100

Part A (10 x 2 = 20)

Answer ALL Questions

1. What is the use of CLOCKOUT and RESET OUT signals of 8085 processor?
2. What is the significance of direction flag bit in 8086 in connection with the string instructions?
3. If the contents of the DS and BX registers are 2500H and 1000H respectively, from which memory location will 8086 fetch the data while executing the instructions MOV CX,[BX]?
4. Write a 8085 assembly language program to add two 16 bit numbers using DAD instruction.
5. What is meant by procedure and give its use?.
6. Define two key lock out and N-key rollover.
7. Configure the ports of the 8255(PPI) as follows: port A = output, port B = input, port C higher = output, port C lower = input.(Assume that the 8255 PPI is located at 20H-23H).
8. What is the function of RS0 and RS1 bits in the PSW of the 8051?.
9. What is the difference between mode0 and mode1 operation of 8051 serial port?
10. Sketch the diagram to show the interface between 8051 and an 8 bit ADC.

PART –B (5 X 16 = 80)

- 11.a. Design the interface required between 8051 and the stepper motor. Explain the hardware and write a program to control the speed of the stepper motor by 8051.
- b. Draw the timing diagram of the 8085 instruction, STA 3000H. (8)
- 12.a. i) With neat diagram explain the architecture of 8086. (8)
- ii. Briefly explain any eight addressing modes available in 8086 with one example for each one of the addressing mode. (8)

OR

- b.i. Sketch the architecture of 8085 microprocessor and explain. (8)
- ii. Explain in detail the different types of instructions available in 8085 processor with two examples of each type. (8)

13.a.i. Write 8085 Assembly Language Program to arrange an array of 8 bit unsigned numbers in descending order. (8)

ii. Write 8086 Assembly Language Program to check whether the two strings, one stored from the address 2000H:1000H in the data segment and the other stored from the address 2000H:3000H are equal or not. If they are equal store 00H in AL or otherwise store 01H.

OR

b.i. What is meant by Assembler Directive? Explain any six Assembler Directives in detail.

ii. Explain in detail the various interrupts available in 8086 processor. (8)

14.a. Explain in detail the internal architecture and the different modes of operation of 8255 PPI. (8)

OR

b. Draw and explain the architecture of 8259PIC. Explain the format and the sequence of Initialization Command Word (ICW) required to configure 8259. (8)

15.a. i. A 4 x 4 matrix key board and a seven segment display are available. It is required to design a microcontroller based system to display the value of the key pressed. (8)

ii. Explain the operation of the parallel ports of 8051 with their internal structure. (8)

OR

b.i. List the various special function registers available in 8051 and explain their uses. (8)

ii. Draw the internal architecture of 8051 microcontroller and explain its salient features. (8)