Question Paper Code: 41552

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fifth Semester

Electronics and Instrumentation Engineering

14UEI502 - MICROPROCESSORS AND INTERFACING

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Specify the non-maskable interrupt of the 8085 microprocessor.

    (a) RST 6.5   (b) RST 5.5   (c) TRAP   (d) INTR

2. How many address lines are necessary for addressing 2*K byte* memory locations?

    (a) 8   (b) 11   (c) 10   (d) 12

3. What are instruction size used in 8085 microprocessor?

    (a) 1, 2 and 3 *bytes*   (b) 2, 3 and 7 *bytes*
    (c) 1, 3 and 5 *bytes*   (d) 1, 2 and 5 *bytes*

4. Mention data store instruction in a stack memory.

    (a) CALL   (b) PUSH   (c) POP   (d) RET

5. Which is the standard baud rate?

    (a) 4500   (b) 12000   (c) 7500   (d) 9600

6. The mode operation of 8255 is

    (a) Fully nested mode   (b) Strobed I/O mode
    (c) Automatic EOI mode   (d) Asynchronous mode

7. Mention the control flags in 8086 microprocessors.

    (a) SF,ZF,PF   (b) CF,AF,OF   (c) DF,IF,ZF   (d) DF,IF,TF

8. What is the maximum memory addressing and I/O addressing capability of 8086?

    (a) 1 *M byte* and 64 *K*   (b) 2 *M byte* and 16 *K*
    (c) 64 *K byte* and 64 *K*   (d) 1 *M byte* and16 *K*

9. Which is not a machine control instruction?

    (a) WAIT   (b) CMC   (c) HLT   (d) NOP

10. Specify the assembler directive of 8086 microprocessors in given below.

    (a) START   (b) STOP   (c) END   (d) BEGIN

PART - B (5 x 2 = 10 Marks)

11. What is the function of the program counter and stack pointer?

12. List the importance of Lookup table for programming.

13. Mention use of scanning line keyboard display controller?

14. What is the purpose of segment registers in 8086?

15. Explain the operation of the following program

      MOV AL, 10H

      MOV DX, 4000H

      OUT DX, al

PART - C (5 x 16 = 80 Marks)

16. (a) Explain the architecture of 8085 microprocessor with neat diagram.   (16)

Or

    (b) (i) Draw the timing diagram of OUT instruction and explain.   (8)

        (ii) Explain the interfacing of a RAM memory C6116 (2*K*x8) with 8085.   (8)

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17. (a) (i) Explain the different addressing modes of 8085 with suitable example. (8)

(ii) Write the assembly language program to transfer the 16 *bytes* of data stored in memory location 4530*H* to memory location 4570*H*. (8)

Or

(b) Develop an Assembly language program to sort an array of numbers in ascending order using the 8085 microprocessor. (16)

18. (a) Draw the block diagram of 8251 and explain the asynchronous and synchronous mode of operations with command and status word. (16)

Or

(b) Explain the functional blocks of 8259 programmable interrupt controller with neat sketch. (16)

19. (a) Explain the maximum mode configuration of 8086 with neat block diagram. (16)

Or

(b) Explain the addressing modes of 8086 microprocessor with at least two examples for each category. (16)

20. (a) Explain the operation of shift and rotate instructions with neat diagram. (16)

Or

(b) Discuss about stack operation and procedures with appropriate example program. (16)

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