Reg. No. : | | | | | | | | | | |

Question Paper Code: 44423

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Computer Science and Engineering

14UEC423 - MICROPROCESSORS AND MICROCONTROLLERS

(Common to Information Technology)

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. *SUB B* instruction in 8085 microprocessor

   (a) resets the carry and sign flag
   (b) sets the zero and parity flag
   (c) sets the zero and carry flag
   (d) can modify all flags according to result

2. Vector address of interrupt RST 7.5 is

   (a) 0.002CH (b) 0.002CH (c) 0.003CH (d) none of these

3. In 8086 each segment register contains _____Kbytes of memory.

   (a) 8 (b) 16 (c)32 (d) 64

4. Which of the following instruction is a logical instruction?

   (a) DIV AB (b) TEST (c) CALL (d) AAM

5. The 8087 coprocessor operate in _____with an 8086 processor and with the same instruction_____

   (a) series, byte (b) parallel, byte
   (c) series, bits (d) parallel, bits

6. The synchronization between processor and coprocessor can be done by _____ connection and the _____ instruction.

(a) RQ/GT_0 and RQ/GT_1, FWAIT (b) INT and NMI, WAIT
(c) BUSY and TEST, FWAIT (d) S_0 and QS_0, WAIT

7. How many address lines are required to access 1 MB RAM using microprocessor?

(a) 16 (b) 8 (c) 20 (d) 12

8. The 8279 is a

(a) DMA controller (b) programmable keyboard display interface
(c) counter (d) interrupt controller

9. What will be the output after execution of the following instruction?

MOV A, #55
ANL A, #67

(a) 54 (b) 45 (c) 55 (d) 67

10. What will be the output after execution of the following instruction?

MOV A, #55
ANL A, #67

(a) 54 (b) 45 (c) 55 (d) 67

PART - B (5 x 2 = 10 Marks)

11. Classify the signals of 8085.

12. List out the flags present in 8086.

13. Compare closely coupled and loosely coupled configurations of co-processor.

14. Highlight the method used to transfer large blocks of data between external device and memory at high speed.

15. Draw the format of PSW of 8051.

PART - C (5 x 16 = 80 Marks)

16. (a) Draw and explain the architecture of 8085 microprocessor. (16)

Or

(b) Explain the instruction set of 8085 in detail (16)

17. (a) (i) Illustrate the each pins of 8086 with neat explanation. (8)

(ii) Outline about the MACRO with example. (8)

Or

(b) Explain in detail about Interrupt Service Routine (ISR) of 8086 processor. (16)

18. (a) Draw the architecture of 8087 numeric data processor and explain each block. (16)

Or

(b) Explain the architecture of 8089 I/O processor with a diagram. (16)

19. (a) Show the function of keyboard and display controller with a neat sketch. (16)

Or

(b) Describe the block diagram of IC 8237 DMA controller. (16)

20. (a) Show the block diagram of 8051 microcontroller and explain the functions in detail. (16)

Or

(b) Explain the interfacing of ADC and DAC with 8051 microcontroller. (16)

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