

Reg. No.

Question Paper Code

11597

B.E./B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022
Fifth Semester
Electrical and Electronics Engineering
20EEPC503 - MICROPROCESSORS AND MICROCONTROLLERS
(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|---|-------------------------------|
| 1. List out the machine cycle of 8085 processor. | 2, K1, CO1 |
| 2. List the priority level of interrupts in 8085 processor. | 2, K1, CO1 |
| 3. State the addressing mode of the SHLD instruction and how it works. | 2, K1, CO2 |
| 4. Find the function of given 8085 instructions: JP, JPE, JPO, and JNZ. | 2, K1, CO2 |
| 5. What is the need for 8259 PIC? | 2, K1, CO3 |
| 6. Illustrate the salient features of Intel 8259 PIC. | 2, K2, CO3 |
| 7. Show the program memory organization in 8051. | 2, K2, CO4 |
| 8. Compare between MOV and MOVX instructions. | 2, K2, CO4 |
| 9. What is M0 ARM cortex? | 2, K1, CO5 |
| 10. Compare between RISC and CISC. | 2, K1, CO5 |

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11. a) Classify the types of interrupts in 8085? Explain in detail the hardware interrupts in 8085. 13, K2, CO1
- OR**
- b) Explain the Timing diagram of STA 8086. 13, K2, CO1
12. a) Explain the operations carried out when 8085 executes the instruction. 13, K2, CO2
(i) MOV A, M (ii) XCHG (iii) DAD B (iv) DAA
- OR**
- b) Summarize the instruction format and addressing modes of 8085 microprocessor. 13, K2, CO2
13. a) Explain the internal architecture and programming of 8259 Programmable Interrupt Controller. 13, K2, CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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OR

- b) Explain with neat sketch, the A/D converter interfacing with 8085 13,K2,CO3 microprocessor.
14. a) Explain with a neat block diagram the architecture of 8051 13,K2,CO4 microcontroller.

OR

- b) Illustrate in detail about the memory organization of 8051 13,K2,CO4 microcontroller and explain.
15. a) Explain the concept of ARM cortex M0. 13,K2,CO5

OR

- b) Outline the system control block of ARM processor. 13,K2,CO5

PART - C (1 × 15 = 15 Marks)

16. a) (i) Illustrate about vectored interrupts in 8051 microcontroller. 7,K2,CO4
(ii) Explain the ARM memory organization with neat diagram. 8,K2,CO5

OR

- b) (i) Explain the various program branching instructions available with 8051 microcontroller. 7,K2,CO4
(ii) Explain little-endian and Big-endian memory organization. 8,K2,CO5