

5E1788

Total No. of Questions : 22

Total No. of Pages : **04**

Roll No. :

5E1788

B.Tech. V-Sem. (Main/Back) Exam. - 2024

Information Technology

5IT3-01 / Microprocessor and Interfaces

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates :

Attempt all ten questions from Part-A, five questions out of seven questions from Part-B and three questions out of five questions from Part-C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.

*Use of following supporting material is permitted during examination.
(Mentioned in Form No. 205)*

1.

2.

PART-A

[10x2=20]

(Answer should be given up to 25 words only)

All questions are compulsory

Q.1. Define bit, byte and word.

Q.2. Difference between microprocessor and microcontroller.

- Q.3. What is a flag? State the various flags used in 8085.
- Q.4. What is instruction cycle?
- Q.5. Define opcode and operand.
- Q.6. Difference between PUSH and POP instructions.
- Q.7. How the 8085 processor differentiates a memory access (read/write) and I/O access (read/write)?
- Q.8. What is Software interrupts?
- Q.9. What operation is performed during first T-state of every machine cycle in 8085?
- Q.10. Write a program to add two bit number. <https://www.rtuonline.com>

PART-B

[5x4=20]

(Analytical/Problem solving questions)

Attempt any five questions

- Q.1. Write an assembly language program to transfer a block of ten data elements from memory location 4000H to 5000H.
- Q.2. Explain with a neat block diagram the architecture of 8085 microprocessor.
- Q.3. Sketch and explain the timing waveform for fetch operation.
- Q.4. Explain addressing modes in 8085.

Q.5. State any three features of 8259 Programmable interrupt controller in detail.

Q.6. Describe with suitable example the operation of stack.

Q.7. Explain the operating modes of 8255 programmable peripheral interface.

PART-C

[3x10=30]

(Descriptive/Analytical/Problem Solving/Design question)

Attempt any three questions

Q.1. Draw Timing diagram of MVI A, 45 instruction.

Q.2. Write an assembly language program in 8085 to find the largest number from an array.

Q.3. Draw and explain interrupt structure of 8085.

Q.4. Explain instruction set in 8085 with suitable example.

Q.5. Write short notes on address bus, data bus, control bus in 8085.

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