

**2011000304020092**  
**EXAMINATION OCTOBER 2024 (ATKT EXAM)**  
**BACHELOR OF SCIENCE (COMPUTER SCIENCE)**  
**(FOURTH SEMESTER)**  
**MICROPROCESSORS**  
**ELECTRONICS-IV**

[Time: As Per Schedule]

[Max. Marks: 50]

**Instructions:**

1. Fill up strictly the following details on your answer book
  - a. Name of the Examination: **BACHELOR OF SCIENCE (COMPUTER SCIENCE) (FOURTH SEMESTER)**
  - b. Name of the Subject: **MICROPROCESSORS ELECTRONICS-IV**
  - c. Subject Code No: **2011000304020092**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. Q. 1 is compulsory.
5. Symbols and abbreviations have their usual meanings.
6. Draw figures/diagrams to support your answer.
7. Assume data, if required.

Seat No:

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Student's Signature

**Q.1 Answer in brief.**

**8**

- A) What is the difference between CALL and JUMP instruction?
- B) What is the difference between SUB B and CMP B instruction?
- C) Explain vectored interrupt and non-vectored interrupt in case of 8085A microprocessor.
- D) What is the function of program counter register?

**Q.2**

- A) Explain the architecture of 8085A microprocessor. **7**
- B) Explain, with suitable example, various instructions of Data transfer group of instruction set of 8085A microprocessor. **7**

**OR**

- A) What is stack? What is stack pointer? Explain, with suitable example, the importance of stack in case of an interrupt. **7**

B) Write a program to add five numbers stored in consecutive memory location starting from memory location 2000H and assume that the result will be 8-bit. Store result at memory location 2100H. 7

**Q.3** A) Explain various instructions of Logical group of instructions set of 8085  $\mu$ P. 7

B) Explain, in detail. flag register of 8085A microprocessor. 7

**OR**

A) Explain various programming modes of 8253. 7

B) With the help of functional block diagram of Programmable Peripheral Interface 8255 chip explain function of each block. 7

**Q.4** A) Explain, with suitable example, various instructions of Data transfer group of instruction set of 8085A microprocessor. 7

B) Write a program to [Assume Data format (D<sub>8</sub>D<sub>7</sub>D<sub>6</sub>D<sub>5</sub>D<sub>4</sub>D<sub>3</sub>D<sub>2</sub>D<sub>1</sub>)] 7  
1) mask-off 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, 7<sup>th</sup> bit of 8-bit data and  
2) mask-off 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup> bit of 8-bit data.

**OR**

A) Explain, in detail, the function of HOLD and HLDK pin of 8085A with reference to other master like direct memory access controller. 7

B) Explain the register structure of 8085A microprocessor. 7

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