

Subject Code: BEC-261

Roll No

**B.TECH.(ECE & ECE(IoT))**  
**Year: 2<sup>nd</sup>, Semester: 4<sup>th</sup>**  
**MINOR TEST (EXAMINATION): 2025-26**  
**Microprocessors and Applications**

Time: 2 Hr.

Max. Marks: 20

Note- Answer all questions

Q1.	Attempt any Two parts of the following.	Marks	CO	BL	PO	PI Cod
a)	What is a microprocessor? How it differs from a CPU? Draw and discuss the architecture of 8085 microprocessor.	4	1	1,2	1	1.1.
b)	Explain the function of ALE and IO/M signals of the 8085 microprocessors. Also, discuss the need of demultiplexing the buses AD <sub>7</sub> -AD <sub>0</sub> .	4	2	1,2	2	1.1.
c)	Explain the function of following instructions: (1) DAD Rp (2) CALL 9000H (3) LXI H,2500H (4) SHLD	4	3	4,5	2	1.1.
Q2.	Attempt any Two parts of the following.					
a)	What is the use of flags? Draw and discuss the flag register of 8085.	3	1	1,2	1	1.1.
b)	Explain the function of TRAP, HOLD and READY signals of the 8085 microprocessor.	3	2	1,3	2	1.1
c)	Explain the function of accumulator, program counter, and stack pointer? Why the program counter and stack pointer are 16-bit registers?	3	1	1,2	2	1.1
Q3.	Attempt any Two parts of the following.					
a)	What are the addressing modes available in 8085 microprocessor? Explain each with the help of suitable examples.	3	3	2,3	1	1.2
b)	Write an assembly language program based on 8085 to sort 10 numbers from memory location 2000H in the ascending order.	3	2	1,2	1	1.1
c)	What is the difference between the instructions STA and STAX? The following program starts at 0100 H: LXI SP, 00FF H LXI H, 0107 H MVI A, 20 H SUB M What will be the content of accumulator when program counter reaches 0109 H?	3	3	4,5	1	1.1

BL - Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 - Applying, 4 - Analyzing, 5 - Evaluating, 6 - Creating)

CO - Course Outcomes

PO - Program Outcomes (As per Examination Reform Policy by AICTE Page No. 15)

PI Code - Performance Indicator Code