

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION SP/2025)**

**CLASS: BMLT  
BRANCH: BMLT**

**SEMESTER : IV  
SESSION : SP/2025**

**SUBJECT: BMT413 INTRODUCTION TO MICROPROCESSOR**

**TIME: 02 Hours**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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|--------|---|-----|-----|
| Q.1(a) | Explain the architecture of the 8085 microprocessors.                         | [2] | 1 2 |
| Q.1(b) | Compare the memory interfacing techniques of 8085 and 8086.                   | [3] | 1 4 |
| Q.2(a) | List different addressing modes of the 8086 microprocessors.                  | [2] | 1 1 |
| Q.2(b) | Write an assembly language program to add two 8-bit numbers using 8085        | [3] | 1 3 |
| Q.3(a) | Define looping and explain its significance in assembly language programming. | [2] | 2 2 |
| Q.3(b) | Write a short program in 8086 to implement a counter using a loop.            | [3] | 2 3 |
| Q.4(a) | Differentiate between stack and subroutine in 8086.                           | [2] | 2 2 |
| Q.4(b) | Explain the working of CALL and RET instructions with an example.             | [3] | 2 3 |
| Q.5(a) | What are vectored interrupts in 8085? Give examples.                          | [2] | 3 1 |
| Q.5(b) | Describe the interrupt handling mechanism in 8086 with a block diagram.       | [3] | 3 4 |

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