

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

**CLASS: BTECH
BRANCH: EEE**

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

SUBJECT: EE303 INTRODUCTION TO MICROPROCESSORS AND MICROCONTROLLERS

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

		CO	BL
Q.1(a)	Define microprocessor and microcontroller.	[2]	1 1
Q.1(b)	What are the major differences between architecture of 8085 and 8086?	[3]	1 1
Q.2(a)	Explain the role of the interrupts in 8086 microprocessor.	[2]	2 2
Q.2(b)	Explain the role of different sections of 8086 architecture with the help of a block diagram.	[3]	2 2
Q.3(a)	Apply Register Indirect Addressing mode to add the 0001H with the content of a memory address 56A2H.	[2]	3 3
Q.3(b)	Apply a suitable addressing mode to add content in the memory of data segment displaced by 06H pointer with the content in the same segment but displaced by 08H in a 8086 microprocessor	[3]	3 3
Q.4(a)	Analyze the following set of instructions, and obtain the content of the FLAG Register after execution of the following instructions. MVI AL, 7FH ADD AL, 1	[2]	4 4
Q.4(b)	Analyze the following set of instructions, and obtain the content of AX, BX and CX after execution of following instructions. MOV CL,03H MOV AX,7FH MOV BX, 0505H ROL AX,CL AND AH,BH OR BL,AL	[3]	4 4
Q.5(a)	Design a block diagram interfacing an 8 bit Analog to Digital Converter with 8086 microprocessor.	[2]	5 5,6
Q.5(b)	Design a block diagram showing the IO Port interfacing technique for the 8086 microprocessor.	[3]	5 5,6

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