POKHARA UNIVERSITY

Level: Bachelor | Semester: Spring | Year : 2024
Programme: BE | Full Marks: 100
Course: Microprocessor and ALP (New) | Pass Marks: 45
Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1.	a)	Show your insight on the development of the very first microprocessor till todays processors	7
	b)	What is addressing mode? Explain the addressing modes of 8085 with examples.	8
2.	a)	Write an assembly language program in 8085 find the sum of Even numbers located from address D050H-D059H and store the result in E055H memory address.	7
	b)	List the machine cycles of 8085 microprocessor. Explain the timing diagram for the 8085 instruction **XRI 25H.**	8
3.	a)	What is the role of pipelining and segmentation in 8086 microprocessor? Explain.	8
	b)	What is macro assembler? Differentiate between macros and procedures.	7
4.	a)	Write an 8086 ALP to check whether the given string is palindrome or not.	8
	b)	What are the FLAGS of 8086 microprocessor? List them out with examples	7
		OR	
		Define address decoding. Differentiate between I/O and memory mapped I/O .	
5.	a)	What is address decoding? Design an address decoding circuit to interface 4KB PROM, 8KB RAM and 16KB EPROM. Is this decoding a full or partial?	7
	b)	Draw and explain the architecture of 8251 USART along with its pins.	8
6.	a)	How multiple interrupts can be handled using Priority Interrupt Controller? Explain with the help of suitable block diagram.	7

b) Explain the mechanism of handling multiple interrupts with proper diagram. 8

7. **Write short notes on: (Any two)** 2×5

a) Maximum and minimum mode of operation

b) Stack and subroutine.

c) ALP development tools.