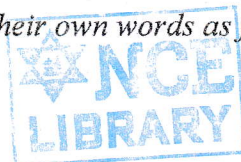


TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2082 Chaitra

Exam.	Regular (New Course)		
Level	BE	Full Marks	60
Programme	BEI, BCT	Pass Marks	24
Year / Part	II / I	Time	3 hrs.

Subject: - Microprocessor (ENEX 201)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.



1. Differentiate microprocessors and microcontrollers. Explain the bus organization of microprocessor with block diagram. [3+3]
2. Define flags. Explain the flags associated with 8085 microprocessor. [3]
3. Draw and explain the timing diagram of MVI M. Also calculate the total execution time. [5+1]
4. Write a program for 8085 microprocessor to transfer eight-bit numbers from A000H to B000H if bit D6 is 1 and D2 is 0. Otherwise transfer data by complementing bit D1 and D5. Assume there are ten numbers. [6]
5. Draw the internal architecture of 8086 microprocessor and explain each unit. How is physical address calculated in 8086 microprocessor? [2+4+2]
6. What are directives in assembly language programming? Explain different assembler directives used in assembly language programming. [1+4]
7. Write an assembly language program for 8086 that accepts string from the user and display each character in newline of a clear screen. Also display the total length of string. [5]
8. Design an address decoding circuit to interface two 1K EPROM and one 2K RAM consecutively using 3 to 8 decoder starting memory location 1000H. [6]
9. Define PPI. Explain the operating modes of Intel 8255A PPI. Explain how control word is made. [1+3+2]
10. What is interrupt service routine? Explain different interrupt signals of 8085 microprocessor and how are they used. [1+5]
11. Differentiate RISC and CISC processor architectures. [3]

TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2082 Kartik

Exam.	Back (New Course)		
Level	BE	Full Marks	60
Programme	BCT, BEI	Pass Marks	24
Year / Part	II / I	Time	3 hrs.

Subject: - Microprocessor (ENEX 201)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. What is microprocessor? Explain briefly about the organization of a microprocessor based system. [1+5]
2. Draw the internal architecture of 8085 microprocessor and explain briefly about its major components. [8]
3. Write a program in 8085 to multiply two 8 bit binary numbers stored at 2050H and 2051H where multiplicand is at 2050H and multiplier is at 2051H. Store 16 bit result at memory location 2052H. [6]
4. What is addressing mode? Explain briefly about different types of addressing mode used in 8086 with suitable example. [2+6]
5. Write an Assembly language programming in 8086 to display, find the factorial of given number. (The given number is in location 2050H). [6]
6. Explain in brief about 8257 with its block diagram. [6]
7. Design an address decoding circuit to interface one 4Kx8 EPROM chip and two 2Kx8 RAM chip with 8085 microprocessor. [6]
8. Differentiate between Memory mapped I/O and I/O mapped I/O. [3]
9. What is an interrupt? Explain briefly about the features of different types of Hardware interrupts in 8085. [2+5]
10. Explain briefly about Flynn's classification of multiprocessor computer architectures. [4]

TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2081 Chaitra

Exam.	Regular (New Course)		
Level	BE	Full Marks	60
Programme	BEI, BCT	Pass Marks	24
Year / Part	II / I	Time	3 hrs.

Subject: - Microprocessors (ENEX 201)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. Define stored program concept. Explain briefly about Von Neumann Architecture. [2+4]
2. Define addressing mode. Explain briefly about different types of addressing mode used in 8085 with suitable example. [2+5]
3. Write a program in 8085 to transfer 8-bit number from one table to other by setting bit D₅ if the number is less than 50 H else transfer the number by resetting bit D₆. [6]
4. Explain 8086 microprocessor with its internal architecture. Explain flags in 8086 Microprocessor. [6+3]
5. Write an Assembly language programming in 8086 to display "Programming is Fun" in screen. [6]
6. Explain in brief about 8255A PPI with its block diagram. [6]
7. Design an address decoding circuit to interface one 2K × 8 ROM chip, one 2K × 8 RAM chip and one 4K × 8 EPROM chip with 8085 microprocessor consecutively starting from the memory location A000H. [6]
8. What is an interrupt? Explain about the interrupt processing in 8085. [2+4]
9. Differentiate between RISC and CISC architecture. [4]
10. Compare and contrast between accumulator based and register based architecture. [4]
