

Tribhuvan University  
**Institute of Science and Technology**  
2068  
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Bachelor Level/ First Year/ Second Semester/ Science  
**Computer Science and Information Technology (CSc. 153)**  
(Microprocessor)

Full Marks: 60  
Pass Marks: 24  
Time: 3 hours.

*Candidates are required to give their answers in their own words as far as practicable.  
The figures in the margin indicate full marks.*

**Section A**

**Attempt any TWO questions:**

**(10x2=20)**

1. Explain the operation of 8085 microprocessor using block diagram. Justify that design of control unit is more difficult.
2. What do you mean by addressing mode? Discuss different types of addressing modes with example.
3. Write a program in 8-bit Microprocessor to store 68h, B3h, C0h, and 11h in the memory location starting from 3000h. Move these data and store in the memory location starting from 3200h.

**Section B**

**Attempt any EIGHT questions:**

**(8x5=40)**

4. What do you understand by PUSH operation? Explain the use of push operation in the case of stack.
5. Write an assembly language program to add two 16-bit numbers.
6. What do you understand by address decoding in the case of memory interface? Explain address decoding using Simple NAND Gate Decoder.
7. What do you understand by I/O interface? Explain different types of I/O instructions.
8. What do you mean by interrupt? Explain in detail about Basic Interrupt Processing.
9. Explain the basic DMA Operation with required timing diagram.
10. How can you interface 80286SX microprocessor? Explain.
11. How can you implement pipelining in the basic microprocessor? Explain it with diagram.
12. Draw the timing diagram for MOVIB and explain it.
13. Write an assembly language program to display a string "Microprocessor programming is a fun" using 16 bit microprocessor code. Assume any necessary data.