

Tribhuvan University
Institute of Science and Technology
2069
✡

Bachelor Level/ First Year/ Second Semester/ Science — Full Marks: 60
Computer Science and Information Technology (CSc. 153) — Pass Marks: 24
(Microprocessor) — Time: 3 hours.

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

Section A

Attempt any TWO questions: **(10x2=20)**

1. Explain the operation of the basic microprocessor using block diagram.
2. What are the uses of flags in the microprocessor? Discuss different types of flags with examples.
3. Write a program in 8-bit Microprocessor to store 45h, A0h, B5h and 15h in the memory location starting from 4000h. Add these data and store the result in 5000h and carry flag in 5001h.

Section B

Attempt any EIGHT questions: **(8x5=40)**

4. What do you understand by POP operation? Explain the use of POP operation in the case of stack.
5. Write an assembly language program to multiply two numbers.
6. Draw the timing diagram for MOV B and explain it.
7. What are the function of I/O interface? Explain it with example.
8. What do you mean by interrupt vector? Explain in detail about hardware interrupt.
9. Explain the basic DMA Operation with required timing diagram. What are the uses of DMA transfers?
10. How can you interface 8036DX microprocessor?
11. Write an assembly language program to display a string "This is a test program" using 16 bit microprocessor code. Assume any necessary data.
12. Why parallel communication is required? Explain with reference to 8-bit system.
13. What is fetch and execute cycle? Explain it with timing diagram.

