Tribhuvan University
Institute of Science and Technology
2066
✡

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 SAP I architecture with suitable block diagram. Compare it with SAP 2 architecture.

2. Explain the application of flags in the microprocessor. Discuss different types of flags with suitable examples.

3. Write a program in 8-bit Microprocessor to store 60h, BAh, 7Ch and 10h in the memory location starting from 2000h. add these data and store the result in 3000h and carry flag in 5001h. explain all the steps.

Section B

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

4. Explain about fetch operation and timing diagram.

5. Write an assembly language program to multiply 05h and 06h. Explain all the steps.

6. What is a macro assemblers? Explain it.

7. What are the functions of I/O interface? Explain it with suitable example.

8. What do you mean by interrupt? Explain in detail about software interrupt.

9. Explain the Basic DMA Operation with required timing diagram. What are the uses of the DMA transfers?

10. Explain about RS 232 interface with suitable example.

11. Write an assembly language to display a string "I want to know more about microprocessor" using 16 bit microprocessor code. Assume any necessary data.

12. Why parallel communication is required? Explain with reference to 8-bit system.

13. Differentiate between PUSH and POP operations with suitable example.