

Tribhuvan University
Institute of Science and Technology

2074



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:

(10×2=20)

1. Draw the block diagram of 8086 microprocessor and explain each block.
2. Ten number of 8-bit data stored at memory location 6000H. Write a program for 8085 microprocessor to calculate the sum of odd numbers and store the sum at 6010H. (The sum may exceed 8-bits).
3. What are the instructions available in 8085 microprocessor for arithmetic and logic operation? Explain each with example. Also mention, how the flags are affected by each instruction.

Section B

Attempt any EIGHT questions:

(8×5=40)

4. What are the basic features of SAP-1 computer? Explain.
5. Draw the timing diagram of instruction MVI B, 9AH stored at memory location 4050H and explain it.
6. Observe the following program and write the content of Accumulator, register B and flags after execution of each instruction. (assume initially all flags are reset)

MVI A, 59H
 MVI B, 67H
 ADD B
 ANI 3AH
 HLT
7. What is CALL operation? How it differs with JUMP operation? Explain
8. Explain the function of following signals:
ALE, READY, RD and IO/M
9. Write an assembly language program for 8086 microprocessor to display "Computer Science and Information Technology".
10. What are the registers available in 8086 microprocessor? Mention the function of each register.
11. What is the importance of interrupt in microprocessor based system? Explain how interrupt controller (8259) can be used to handle interrupts.
12. What are the differences between parallel and serial communication? Explain RS 232 interface.
13. Explain briefly on keyboard and display controller.