TRIBHUVAN UNIVERSITY
Institute Of Science and Technology
2071

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Computer Science and Information Technology (CSc. 153)
(Microprocessor)

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

(2x10=20)

Attempt any two questions.

1. Draw and explain the functional block diagram of 8085 microprocessor.
2. Write a program in 8-bit microprocessor to multiply two 16-bit numbers and store in the memory location starting from 3500H. Save the carry bits in the location starting from 3600H.
3. List the elements of the 8255A programmable peripheral Interface and explain its various operating modes in detail.

Section B

Attempt any eight questions: (8x5=40)

4. List bidirectional registers of SAP2. Why bidirectional? Explain.
5. Compare and contrast microprocessor, CPU and microprocessor.
6. Define maskable and non-maskable interrupt. Explain the role of TRAP in 8085 microprocessor.
7. The contents of the accumulator are 93H and the contents of register C are B7H. Explain the status of different flags after adding the content of registers A and C.
8. Illustrate the steps and the timing of data flow when the instruction code 4FH stored location 2005H is fetched by the microprocessor unit.
9. Explain the role of wait states to synchronize the execution speed of microprocessor with the response time of memory while transferring data.
10. Write an assembly language program to subtract two 16-bit numbers.
11. Define bus. Describe the function of different types of buses in reference to the 8085 microprocessor.
12. What is an interrupt? Explain software interrupt in detail.
13. What do you understand by macro assembler? Explain.