Tribhuvan University

Institute of Science and Technology

2080

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Bachelor Level / First Year/ Second Semester/ Science

Computer Science and Information Technology (CSC167)

(Microprocessor)

(NEW COURSE)

Full Marks: 60

Pass Marks: 24

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

Long answer questions.

Attempt any TWO questions. **(2×10=20)**

1. Differentiate between 8085 and 8086 microprocessor. Explain the concept of demultiplexing of address bus and why is it required? (4+4+2)
2. Write an Assembly Language Program for calculating the factorial of a number using 8085 microprocessor. (10)
3. Draw the block diagram of 80286 microprocessor and explain. (10)

Section B

Short answer questions.

Attempt any EIGHT questions. **(8×5=40)**

4. What is Paging? Explain the concept of memory access in protected mode. (5)
5. What is the importance of direct memory access? Explain the mechanism of direct memory access. (1+4)
6. List different types of ports. What are the main characteristics of programmable interrupt controller 8259A? (1+4)
7. Differentiate between instruction cycle and machine cycle. Draw timing diagram of MVI A, 32 H. (1+4)
8. Write an Assembly Language Program ro reverse the given string. (5)
9. Explain different types of system buses and also indicate whether they are unidirectional or bidirectional. (5)
10. What is the significance of interrupt masking? Differentiate between vectored and polled interrupt. (1+4)
11. Illustrate memory access in GDT. (5)
12. Write short notes on: (2×2.5=5)
    a) Jumps
    b) Accumulator