CSc.162-2075 ✡

Tribhuvan University
Institute of Science and Technology
2075

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Bachelor Level / First Year /Second Semester/Science
Computer Science and Information Technology (CSc 162)
(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.

Long answer questions:

Group A

Attempt any Two questions: (2x10=20)

1. Draw block diagram of 80286 and explain its functional units.
2. Explain instruction cycle, machine cycle and T-States. Draw timing diagram of STA instruction. Make necessary assumptions.
3. Write an assembly language program to find the smallest number in an array using 8 bit microprocessor. (Assume appropriate array data and address where minimum array size of 15 should be considered.)

Short answer questions:

Group B

Attempt any Eight questions: (8x5=40)

4. Differentiate between vectored and non-vectored interrupts. Where and how 8259 PIC can be used to handle interrupts.
5. Explain the addressing modes of 8085 microprocessor with examples.
6. Write an ALP for 8086 to read a string and display the string in uppercase.
7. What is system bus? Explain different types of system bus in detail.
8. How DTE and DCE are wired using Rs-232 cable. Explain the process of double handshake I/O.
9. What is instruction set? Explain various kinds of instructions of 8085 microprocessor.
10. What is mean by memory interfacing? Explain the address decoding process in the 8085 microprocessor with 3 to 8 decoder.
11. Explain how pipelining is achieved in 8086 microprocessor.
12. Write short notes on:
    a) Von Neumann architecture
    b) Macro Assembler