CSc.362-2075 ✡

Tribhuvan University

Institute of Science and Technology

2075

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Bachelor Level/Third Year/Six Semester/Science — Full Marks: 60
Computer Science and Information Technology (CSc. 362) — Pass Marks: 24
(Embedded System Programming) — 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.

Attempt all questions.

Section A

Long answer question. (10×2=20)

1. What is meant by periodic job? How it aperiodic jobs are handled by RTOS? Discuss deadline monotonic scheduling policy with example.
2. What is meant by busy wait IO? Explain busy wait IO programming with suitable example.

Section B

Short answer question. (5×8=40)

3. What are basic components of embedded systems? Give any two examples of embedded systems with detailed description.
4. Discuss different types of processors used in embedded system design.
5. What is meant by system specification of embedded system? Which tools are used for this? Explain about system specification with suitable examples.
6. What is the role of linker in embedded program generation? Explain the role of two-phase linker with suitable example.
7. When SRAM is preferred over DRAM technology? Explain in detail.
8. When C is preferred than assembly language for writing programs of embedded systems? Write down simple C program that illustrates use of C for embedded system programming.
9. Discuss about Signal conditioning and data conversion in detail.
10. Write short notes on:
    a) Transducers
    b) Emulators