Tribhuvan University
Institute of Science and Technology
2076

✡

Bachelor Level / Third Year /Six Semester/Science   Full Marks: 80
Computer Science and Information Technology (CSc. 354)   Pass Marks: 32
(Real Time System)   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.

Group A
Attempt any Two questions.   (2x12=24)

1. Explain the real time system with various components with its block diagram.

2. Explain the reference model of realtime systems with examples.

3. What do you mean by real time scheduling? Differentiate between clock-driven approach and priority driven-approach.

Group B
Attempt any Eight questions.   (8x7=56)

4. What do you mean by digital control? What are the applications of real time system?

5. Explain the soft-real time system with example.

6. Expalin the scheduling hierarchy with practical example.

7. Differentiate between timer-driven scheduler and clock driven scheduler.

8. Explain the Fixed-priority versus dynamic-priority algorithms with example.

9. Explain the schedulability text for fixed-prority tasks with short response times.

10. Differentiate between Deferrable servers and Sporadic servers.

11. Explain the use of priority-ceiling protocol in dynamic-priority system.

12. Explain the scheduling algorithms for end to end periodic tasks.

13. Write short notes on :
    a) Real time protocol
    b) Weighted round-robin service disciplines ·