Tribhuvan University
Institute of Science and Technology

2069

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

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: **(2 x 12=24)**

1. What is a real time system? Explain its various components with a suitable block diagram. Explain the RADAR signals processing with block diagram.
2. What do you understand by static slack computation in fixed – priority systems? Explain with example.
3. What are the three commonly used approaches to scheduling the real time systems? Compare each of them.

Group B

Attempt any Eight Questions: **(8 x 7=56)**

1. What is digital control? Explain with example.
2. What is soft real time systems? Explain with example.
3. Differentiate between dynamic system and static systems with example.
4. Explain the sporadic server in fixed priority system.
5. Explain the slack computation in fixed priority system with example.
6. What are the procedure of a simple acceptance test in deadline-driven systems? Explain.
7. What are the properties of the priority-inheritance protocol? Explain.
8. Explain the weighted round robin service disciplines with example.
9. Explain the real time communication model with diagram.
10. Write Short notes on:
    a) Fixed Priority scheduling in CAN
    b) Greedy WRR discipline