Code: 13A05804

R13

B.Tech IV Year II Semester (R13) Regular Examinations April 2017
REAL TIME SYSTEMS
(Common to CSE and IT)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
  (a)   List the applications of real time system.
  (b)   What is hard real-time system?
  (c)   Explain clock driven approach.
  (d)   How to improve average response time of periodic jobs?
  (e)   What is priority driven scheduling?
  (f)   Explain the concept of maximum schedulable utilization.
  (g)   What is deferrable server?
  (h)   Explain the concept of constant utilization server.
  (i)   What is meant by priority inheritance protocol?
  (j)   Explain effects of resource contention and resource access control.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   What is Weighted Round—Robin approach? Explain in detail.
OR
3   Explain earliest deadline first scheduling (EDF) algorithm.

UNIT – II

4   What are advantages and disadvantages of Clock-driven scheduling?
OR
5   Explain concept of Timer-Driven scheduler in detail.

UNIT – III

6   Explain RM (Rate Monotonic) scheduling.
OR
7   What is dynamic priority based algorithm? Explain in detail.

UNIT – IV

8   Explain in detail about scheduling of sporadic jobs.
OR
9   How slack stealing in deadline driven system is implemented? Explain with example.

UNIT – V

10   Explain in detail about basic priority ceiling protocol.
OR
11   What are elements of scheduling algorithms for End-to-End periodic tasks?

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