Code: 13A05804

R13

B.Tech IV Year II Semester (R13) Regular & Supplementary Examinations April 2018
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)   What are applications of real time systems in signal processing?
  (b)   What is hard real time system?
  (c)   What is structure of cyclic scheduler?
  (d)   What is scheduling hierarchy?
  (e)   What is static priority algorithm?
  (f)   What are the conditions for RM algorithm?
  (g)   What is sporadic server?
  (h)   What is the use of priority ceiling protocol?
  (i)   What is meant by resource contention?
  (j)   What are algorithms for end-to-end periodic tasks?

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

UNIT – I

2   What is priority driven approach? Explain in detail.
OR
3   Compare offline Vs online scheduling.

UNIT – II

4   Explain the advantages and disadvantages of clock-driven scheduling.
OR
5   Explain static scheduling algorithm in detail.

UNIT – III

6   Explain how optimality of RM algorithm is achieved.
OR
7   Compare fixed priority Vs dynamic priority algorithms.

UNIT – IV

8   Explain real time performance of jobs with timing constraints.
OR
9   Explain slack stealing in dead-line driven systems with example.

UNIT – V

10   Explain schedulability of fixed priority end-to-end periodic tasks.
OR
11   Explain Multiprocessor priority ceiling protocol.

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