Code: 13A05804

R13

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 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)   What are applications of real time system in the area of signal processing?
   (b)   What is soft real-time system?
   (c)   Write advantages of clock driven approach.
   (d)   Explain structure of cyclic scheduler.
   (e)   What is static priority algorithm?
   (f)   What are schedulability conditions for DM algorithm?
   (g)   What is Sporadic Servers?
   (h)   Explain the concept of queueing server.
   (i)   What is mean by resource contention?
   (j)   How task assignment is performed in multiprocessor scheduling?

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

UNIT – I

2   What is priority driven approach? Explain in detail.

OR

3   Explain optimality of LST algorithm.

UNIT – II

4   Explain static scheduling algorithm in detail.

OR

5   What are notations and assumptions for timer driven scheduler?

UNIT – III

6   Explain how optimality of RM (Rate Monotonic) algorithm is achieved.

OR

7   What is dynamic priority driven scheduling? Explain with an example.

UNIT – IV

8   Explain real time performance of jobs with timing constraints.

OR

9   How slack stealing in fixed priority system is implemented? Explain with example.

UNIT – V

10   Explain use of priority ceiling protocol in dynamic priority systems.

OR

11   Explain schedulability of fixed priority end to end periodic tasks.

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