Code: 13A05804

R13

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 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 is soft real time system?
(b) List any two critical real time system applications.
(c) List some advantages of clock driven approach.
(d) What is offline scheduling?
(e) What are schedule conditions for DM algorithm?
(f) What is deferrable server?
(g) What is the concept of queuing server?
(h) What is slack stealing in dead-line driven system?
(i) How task assignment is performed in multiprocessor scheduler?
(j) What are the effects of resource contention?

PART – B

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

UNIT – I

2 Explain optimality of LST algorithm in detail.

OR

3 Give an account on online scheduling. Compare dynamic Vs static systems.

UNIT – II

4 Explain how to improve the average response time of aperiodic jobs.

OR

5 Explain Timer-Driven scheduler. Write notations and assumptions for timer driven scheduler.

UNIT – III

6 Compare the optimality of RM and DM algorithm.

OR

7 Explain dynamic priority driven scheduling with example.

UNIT – IV

8 Explain slack stealing in fixed priority systems with example.

OR

9 Illustrate a two-level scheme for integrated scheduling.

UNIT – V

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

OR

11 Give the model of multiprocessor and distributed systems.

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