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Max. Marks: 70

Code: 13A05804

B.Tech IV Year II Semester (R13) Regular & Supplementary Examinations April 2018 **REAL TIME SYSTEMS**

(Common to CSE and IT)

Time: 3 hours

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PART – A

(Compulsory Question)

- 1 Answer the following: $(10 \times 02 = 20 \text{ Marks})$
 - (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 – IL

- 4 Explain the advantages and disadvantages of clock-driven scheduling.
 - OR 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.
