

Code: 13A05804

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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