

***B.Tech Degree VIII Semester (Supplementary) Examination
September 2011***

**CS 804 (A) REAL TIME SYSTEMS
(2002 Scheme)**

Time : 3 Hours

Maximum Marks : 100

- I. (a) What are hard and soft real time systems? Give some examples into which real time systems are put? (10)
(b) With suitable example explain the model of a Real Time System? (10)
- OR**
- II. (a) Explain Real Time Systems and their essential characteristics. (10)
(b) Write a note on Human-Computer Interaction. (10)
- III. (a) What are the various programming languages used in the development of Real Time System? (10)
(b) Explain how error handling is achieved in real time systems. (10)
- OR**
- IV. (a) Explain how real time languages manage concurrency. (10)
(b) Explain how rate monotonic scheduling algorithm works. How can it deal with sporadic task? (10)
- V. (a) Describe the characteristics of Real Time Databases. (10)
(b) Write a note on Fault-Tolerant Routing. (10)
- OR**
- VI. (a) Explain the concept of two phase approach to improve predictability. (10)
(b) Write a note on various concurrency control issues and solutions. (10)
- VII. Describe how VTCSMA algorithm works. How is the performance of the algorithm? (20)
- OR**
- VIII. Write notes on:
(i) Stop and Go Multi hop protocol
(ii) Hierarchical Round Robin protocol
(iii) Deadline based protocol (6+7+7=20)
- IX. (a) Explain how to prevent faults from propagating through the system. (15)
(b) Write a note on Integrated Failure handling. (5)
- OR**
- X. (a) How can we achieve fault tolerance through redundancy? Explain the different types of redundancy with relevant figures. (15)
(b) Write a note on Malicious failures. (5)