

B.E. (CST) Part -IV 8th Semester Examination, 2006
Real Time System Design (CST - 801)

Time - 2Hours

Full Marks -50

Answer any **FOUR** questions, the questions are of equal value.

TWO marks reserved for neatness and precise answer

1. (a) Explain with a suitable layout of embedded computing environment, the applications of real time computation.
(b) What are the desirable features of distributed real time system environment?
(c) Define time, time constraints, on-line and off-line processes.
5+3+4

2. (a) Discuss the different types of clock systems.
(b) Describe the master slave algorithms for clock synchronization.
(c) How to enhance the speed of execution of the master slave algorithm?
3+6+3

3. (a) Why distributed clock algorithms may be used for clock synchronization?
(b) Discuss its fault tolerant feature and write the pseudo-code for minimization of maximum error for synchronization of the distributed clock system.
3+9

4. (a) Discuss the object architecture with its own user justification.
(b) List the features of the Joint of any object and their classification based on relations with other objects.
4+8

5. (a) List the tasks of an interrupt handler.
(b) Write down the algorithms to be executed on server for servicing the interrupts.
3+9

6. Write short notes on the following:-
(a) Non preemptive scheduling
(b) Communication service offered by Agent class of objects
(c) Temporal properties and relations used in implementation of RTOS
4+4+4