

Roll No:

Total No. of Questions : 09]

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[Total No. of Pages :02

Paper ID [CS324]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 6th/7th)

REAL TIME SYSTEM (CS - 324)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

MAY 2008

Section - A

Q1)

(10 × 2 = 20)

- a) How a real time system is different from other computer based systems?
- b) "Round Robin Scheduling does not work for the real time applications", comment on the statement.
- c) How hard deadlines are performance measures for the real time systems?
- d) What is the difference between static priority and dynamic priority algorithms? Give example for each.
- e) What do you mean by a Bin Packing algorithm for scheduling?
- f) How real time databases are different from the general purpose databases?
- g) What do you mean by optimistic concurrency control for real time systems?
- h) How a network topology is important for real time communication?
- i) What is the principle of Stop and Go Multihop protocol?
- j) Give the applications of real time systems.

Section - B

(4 × 5 = 20)

- Q2)** Explain the architecture of a real time system. How can you classify the tasks for the real time systems?
- Q3)** What are the performance measures for real time systems? Discuss the properties that the different performance measures should have.
- Q4)** Discuss fault tolerant scheduling. What are its different advantages over other scheduling algorithms?
- Q5)** Write short note on main memory databases.
- Q6)** Discuss the different architectural issues in designing a real time system.

Section - C

(2 × 10 = 20)

- Q7)** Explain Earliest Deadline First (EDF) algorithm in detail.
- Q8)** How the execution of concurrent transactions can be controlled in real time systems? Discuss with the help of suitable examples.
- Q9)** Discuss in detail the token based protocol for communication in real time systems.

