Roll No. .....

Total No. of Questions : 09] [Total No. of Pages : 02

B. Tech. (Sem. - 6th)

REAL TIME SYSTEMS

SUBJECT CODE : CS - 324

Paper ID : [A0475]

[Note : Please fill subject code and paper ID on OMR]

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.

Section - A

Q1) *(10 × 2 = 20)*

a) Name the architectural requirements for tightly coupled real time systems.

b) List the important features of ADA useful for real time programming.

c) How alpha testing is different from beta testing?

d) Define the term hard real systems?

e) What is the role of deterministic scheduling?

f) What is software reliability?

g) What is the role of neural networks in real time systems?

h) List the advantages of multihop protocol.

i) What are main memory databases?

j) How a network topology is important for real time communication?

Section - B

(4 × 5 = 20)

Q2) Discuss the different architectural issues in designing a real time system.

Q3) What are purpose of a general purpose database and compare it with Real Time database.

Q4) What are advantages and disadvantages of fault tolerant scheduling over other scheduling algorithms?

Q5) What are periodic and aperiodic tasks. Explain with the help of suitable examples.

Q6) How the performance of a real time system can be evaluated? Discuss the different properties that evaluating parameter should have.

Section - C

(2 × 10 = 20)

Q7) Explain the Rate-Monotonic scheduling algorithm in detail.

Q8) Explain the difference between contention based protocol and token based protocol.

Q9) What are different procedures available to control the concurrent transactions in real time systems?