PAPER ID-310270

Roll No: | | | | | | | | | | | | | |

B TECH
(SEM-VII) THEORY EXAMINATION 2020-21
DISTRIBUTED SYSTEM

Time: 3 Hours *Total Marks: 70*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	Define replication.
b.	Explain Locks.
c.	Define casual and total ordering.
d.	Explain Limitation of Distributed system.
e.	Describe Distributed Deadlock.
f.	Differentiate between resource and communication deadlocks.
g.	Differentiate between Backward and Forward recovery.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	Explain Distributed System. What are the basic features of distributed system in detail?
b.	Define the architectural models of distributed system.
c.	Describe distributed mutual exclusion. What are the requirements of distributed mutual exclusion theorems?
d.	Discuss Atomic Commit in Distributed Database system with example.
e.	Describe the issues in Fault tolerance in detail.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a)	What is Logical Clock? Explain Lamport's Clock with suitable example.
(b)	Describe Vector Logical Clock with suitable example.

4. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Explain any Token based algorithm in detail.
(b)	Explain the performance metric for distributed mutual exclusion algorithms in detail.

5. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Briefly explain the classification of agreement problem.
(b)	Define distributed shared memory. What are the design issues in distributed shared memory?

6. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Explain Failure Recovery in Distributed Systems. Also explain the Recovery in Distributed Database Systems in detail.
(b)	Describe the followings (i) Consistent Checkpoints (ii) Voting protocols.

7. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Discuss the Concurrency control in distributed transactions in detail.
(b)	Explain the Followings (i) highly available services (ii) Fault - tolerant services