

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2024

Subject Code:3170719

Date:16-12-2024

Subject Name: Distributed System

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

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|------------|-----|---|-----------|
| Q.1 | (a) | Define Distributed system. Give any two differences between traditional system and distributed system. | 03 |
| | (b) | List types of Distributed system. Explain any one in details. | 04 |
| | (c) | Discuss reliability as a design issue in Distributed System. | 07 |
| Q.2 | (a) | Define Thread. Discuss the importance of Threads. | 03 |
| | (b) | Explain Layered architecture and Data Centered architecture in brief. | 04 |
| | (c) | Discuss Code Migration in detail. | 07 |
| | | OR | |
| | (c) | Discuss RPC and RMI. | 07 |
| Q.3 | (a) | Explain structured naming scheme with example. | 03 |
| | (b) | Discuss Iterative Name Resolution technique. | 04 |
| | (c) | Explain Lamport's Logical Clock in detail. | 07 |
| | | OR | |
| Q.3 | (a) | Explain flat naming scheme with example. | 03 |
| | (b) | Discuss Recursive Name Resolution technique. | 04 |
| | (c) | Explain bully election algorithms. | 07 |
| Q.4 | (a) | Discuss the importance of synchronization. | 03 |
| | (b) | Discuss the importance of Replication in Distributed System. | 04 |
| | (c) | What is mutual exclusion? Explain different categories of mutual exclusion algorithm in Distributed System. | 07 |
| | | OR | |
| Q.4 | (a) | Discuss replica management in brief. | 03 |
| | (b) | Discuss the types of consistency models in brief. | 04 |
| | (c) | Explain how the failures are handled in distributed system. | 07 |
| Q.5 | (a) | Give difference between Authorization and Authentication. | 03 |
| | (b) | Explain different goals of security in brief. | 04 |
| | (c) | Discuss Distributed File System in details. | 07 |
| | | OR | |
| Q.5 | (a) | What is Denial of Service? Explain briefly. | 03 |
| | (b) | Discuss Firewall and Access Control in brief. | 04 |
| | (c) | Define given terms.
1. Process 2. Consistency 3. Fault Tolerance 4.Avaibility 5.Scalability 6.Commit 7.Deadlock. | 07 |
