I

Roll No.

## TCS-801

## MID SEMESTER EXAMINATION, 2021

DISTRIBUTED SYSTEM

Time: 11/2 Hours

Maximum Marks: 50

- Note: (i) Answer all the questions by choosing any *one* of the sub-questions.
- (ii) Each question carries 10 marks.
- 1. (a) What are the different security techniques available in distributed systems? Explain digital signature with suitable example.

10 Marks (CO1, CO2)

OR

(b) Explain Maekawa's algorithm with suitable example. Also write the limitation of the Maekawa's algorithm.

10 Marks (CO1, CO2)

2. (a) Explain, what the necessary condition for systems. explain Resource deadlock in distributed deadlock in Distributed System. Also 10 Marks (CO1, CO2)

OR

- (b) (i) Explain system models of Distributed systems
- (ii) Explain file service architecture of Distributed file systems with suitable figure. 10 Marks (CO1, CO2)
- 3. (a) Explain token-based algorithm for mutual exclusion in Distributed system. Explain mutual exclusion using suitable example. Suzuki-Kasami broadcast algorithm for

10 Marks (CO1)

OR

(b) Explain the limitation of distributed explain termination system using suitable example. Also detection

Distributed system.

10 Marks (CO1)

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4 (a) Explain different Deadlock models in example. Ramamoorthy algorithm using suitable Distributed system. Explain HO-10 Marks (CO2)

OR

- (b) What is Agreement protocol in distributed problem and write solution to Byzantine system? Explain Byzantine Agreement Agreement problem. 10 Marks (CO2)
- (a) What is Lamport's Happened Before clock? Rules for Lamport's clock and vector Relationship? What are the Clock 10 Marks (CO1)

OR.

(b) Explain using Lamport's logical clock: algorithm. Solve the following problem Lamport's logical clock

10 Marks (CO1, CO2)

