**ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**INTERNEL ASSESSMENT TEST – II**

DATE: 20.04.23 TIME: 9:30 AM – 11:00 AM

SUBJECT NAME: DISTRIBUTED SYSTEMS YEAR: III

SUBJECT CODE: CS8603 SEMESTER: VI

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| **PART A (9\*2=18)** | | | |
| **Q.NO** | **QUESTION** | **BLOOM’S TAXONOMY** | **CO MAPPING** |
| 1 | What are the different models of deadlock? | K1 | CO3 |
| 2 | What is the purpose of the wait-for-graph (WFG)? Give an example for WFG | K1 | CO3 |
| 3 | What are the conditions for deadlock? | K1 | CO3 |
| 4 | What is the purpose of associating timestamp with events in Lamport’salgorithm? | K1 | CO3 |
| 5 | Compare Lamport’s algorithm &Ricart Agarwala algorithm | K2 | CO3 |
| 6 | What do you meant by agreement problem in distributed system? | K1 | CO4 |
| 7 | Why coordination is required in distributed systems? | K1 | CO4 |
| 8 | What do you mean by local checkpoints? | K1 | CO4 |
| 9 | What is the drawback of a checkpoint based rollback recovery approach? | K1 | CO4 |
| **PART – B (2\*16=32)** | | | |
| 6)a) | Explain Maekawa’s algorithm for mutual exclusion and compare this with Token based & non token based algorithms in terms of complexity | K4 | CO3 |
| Construct Suzuki–Kasami‘s broadcast algorithm for mutual exclusion | K4 | CO3 |
| **OR** | | | |
| 6)b) | Categorize the distributed deadlock detection algorithms and explain any two of them. | K4 | CO3 |
| Construct Lamport’s algorithm for mutual exclusion | K4 | CO3 |
| 7)a) | Examine the issues involved in a failure recovery with the help of a distributed computation (10) | K4 | CO4 |
| Categorize check pointing algorithms (6) |
| **OR** | | | |
| 7)b) | Explain Koo and Toueg coordinated check pointing and recovery technique algorithm for Failure recovery (8) | K4 | CO4 |
| Construct a Phase King algorithm for consensus in the face of Byzantine failures (8) | K4 | CO4 |

**COURSE COORDINATOR HOD PRINCIPAL**