

**SSN COLLEGE OF ENGINEERING, KALAVAKKAM – 603 110**  
**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**B.E. Computer Science and Engineering**  
**CS6601      DISTRIBUTED SYSTEMS**

**Date: 24.02.2018, 8.00-9.30 AM**

**UNIT TEST – 2 ReTest**

**Max. Marks: 50**

**Academic Year: 2017-2018 EVEN**

**Batch: 2015-2019**

**Semester: 6.**

**Faculty: Mr. H.Shahul Hamead & Ms. Y.V.Lokeswari**

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**PART -A**

**(5X2 =10 Marks)**

1. What is an Arbitrary failure and how it differs from Fail-stop / Crash. **(K2, CO2)**
2. What is Ajax? **(K2, CO2)**
3. Mention the parameters to measure the performance of Lamport's Distributed Mutex algorithm? **(K3, CO4)**
4. What is a mobile agent? **(K2, CO2)**
5. Mention applications of Consensus in Distributed Systems. **(K2, CO4)**

**PART – B    (Answer all Questions)**

**(32 Marks)**

6. Briefly explain about direct and indirect communication paradigms in distributed system. **(8+8) (K2, CO2)**
7. Explain Ricart Agrawala's Algorithm for Non-Token based Mutual Exclusion and discuss about optimization method for Ricart Agrawala's Distributed Mutex Algorithm. **(16) (K2, CO4)**

**PART – C**

**(8 Marks)**

8. Consider Byzantine Consensus for the following scenario **(4+4)**  
**(K3, CO4)**
  - a. Simulate the case where source is a faulty processor.
  - b. Simulate the case where byzantine consensus cannot be arrived for 3 processors where one being faulty. Specify the condition on which Byzantine consensus could be reached where there are  $f$  faulty processors.

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Prepared By

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