SSN COLLEGE OF ENGINEERING, KALAVAKKAM – 603 110
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
B.E. Computer Science and Engineering
CS6601   DISTRIBUTED SYSTEMS
Date: **06.03.2018**, 8.00-9.30 AM   UNIT TEST – **3 Retest**   Max. Marks: 50
Academic Year: **2017-2018 EVEN**   Batch: **2015-2019**
Semester: 6.   Faculty: **Mr. H.Shahul Hamead & Ms. Y.V.Lokeswari**

PART -A   (5X2 =10 Marks)

1. What is Phantom deadlock?   **(K2, CO4)**
2. What is the need for Replication?   **(K2, CO4)**
3. Define "Durability" property of Transaction   **(K2, CO4)**
4. What is strict 2PL in Distributed transactions   **(K2, CO4)**
5. Mention the advantages of process migration.   **(K2, CO5)**

PART – B   (Answer all questions)   (28 Marks)

6. Explain in detail about the steps involved in Process Migration.   (16) **(K2, CO5)**
7. Explain deadlocks that could happen due to AND-request Model in distributed environment and discuss its solution with a clear edge chasing example.   (12) **(K3, CO4)**

PART – C   (Answer any one question)   (12 Marks)

8. **(i)** Discuss about Two phase commit protocol, its limitation and need for 3 phase commit protocol.   (8) **(K3, CO4)**
   (ii). Discuss about rules for applying locks in Nested Transactions.   (4) **(K3, CO4)**

OR

9. For the following schedule, answer the following   (6+6) **(K3, CO4)**
   (i). Identify the set of actions which would lead to "Lost Update" and "Dirty Read" scenario
   (ii). If the instruction at t9 of Transaction 1 is changed as "Write (X) and Commit ", will the output of the schedule be serially equivalent of the given schedule if Transactions are executed in the order Transaction 1, then Transaction 2? Justify

Time	Transaction 1	Transaction 2
t0	X=0	X=0
t1	Read (X)	
t2	X = X+1	
t3	Write (X)	
t4		Read(X)
t5		X= X+2
t6	X=X+5	
t7		Write(X)
t8		Commit
t9	Abort	

Prepared By   Reviewed By

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