Sem-V (CBSGS) – Distributed computing & cloud computing Nov-2016.

QP CODE : 516500

3 HOURS Total Marks: 80

N.B. 1. Question No. **1** is **compulsory.**

2. Answer **any FOUR** from the remaining SIX questions

3. Figures to the right indicate full marks.

1 a. Explain the concept of logical clocks and their importance in distributed system. 10
A clock of a computer system must never run backward. Explain how this issue can be handle with implementation of logical clock.

b. Explain in details how the existence of multiple computers in distributed system is made invisible and only single system image is provided to the user. 10

2 a. Explain Election Algorithm in detail with diagram. 8
b. Explain various Clock Synchronization Algorithm in detail. 7

3 a. What is Stub? Explain how the use of Stubs helps in making an RPC mechanism transparent. 8
b. What are the Load Balancing transfer policies used for distributed system management. 7

4. a. Why is the process migration important in Distributed System? What are different address space transfer mechanisms used in process transfer. 8
b. What is Critical Section? How will you implement Mutual Exclusion Algorithm? 7

5. a. What are threads? How they are different from process? Explain various Thread Models. 8
b. Explain Different Consistencies Model for Distributed Shared Memory System. 7

6. a. What is Cloud Computing. Discuss the characteristics of Cloud Computing. 8
b. How the Data Security maintained in the cloud? 7

7. Write a short note on any **Three** of the following :- 15

i. Grid Computing

ii. Total ordering of the Event

iii. Failure Handling Mechanism

iv. Call Back RPC

v. Happened Before Relation

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