

Roll No .....

## IT-601 (GS)

B.E. VI Semester Examination, June 2020

### Grading System (GS)

#### Distributed Systems

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.  
iii) Assume suitable data if missing.

1. What are logical clocks? Why does a logical clock need to be implemented in Distributed systems? Explain with an example what are the impacts of absence of global clock and shared memory.
2. What is a covert channel? Which methods are used by covert channel to leak information to other processes?
3. What is distributed transparency? Explain the different types of distributed transparencies.
4. What is Mutual exclusion in distributed system environment? Also discuss mutual exclusion handling techniques.
5. Write short notes on the following:-
  - a) Election algorithm
  - b) Assignment problem in parallel
  - c) Flat and nested transaction
  - d) Atomic commit protocols
6. Why architectural model is important in the distributed system design? What is resource sharing and its importance?

7. Describe the concept of Remote method invocation with suitable example.

OR

Explain destination based routing algorithm with suitable example.

8. Write short notes on:(Any two)
  - a) Destination based Routing
  - b) Consensus problem
  - c) Token based algorithm
  - d) Shared memory

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