

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Information Technology) (Sem.-6)

**DISTRIBUTED SYSTEMS**

Subject Code : BTIT-607-18

M.Code : 79626

Date of Examination : 07-07-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**1. Write briefly :**

- a) State the goals of distributed systems.
- b) What are the different types of transparency in distributed system?
- c) Differentiate between synchronous and asynchronous communication.
- d) How interceptors handle remote object invocations?
- e) What is the importance of network time protocol?
- f) What is reliability?
- g) What is multicasting?
- h) What is middleware?
- i) Define thread in distributed system.
- j) Define stub.

## SECTION-B

2. What is scalability in distributed systems? State its challenges. Mention different scaling techniques.
3. What is autonomic computing? Write the significance of feedback control model.
4. Explain message oriented transient and persistent communication. Write various socket primitives for TCP/IP.
5. What is clock synchronization? Write its algorithms.
6. Explain reliable group communication. Write various issues involved in reliably delivering messages to a process group.

## SECTION-C

7. Explain different architecture styles of distributed system. Draw neat diagrams.
8. What are logical clocks? Explain the importance of Lamport's logical clocks in distributed systems.
9. Explain different client centric consistency models.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**