

Q.P. Code : 594803

(3 Hours)

[Total Marks : 80

- N.B. :** (1) Question No.1 is **compulsory**.
(2) Solve **any three** from remaining **five**.
(3) Assume suitable **data** wherever **necessary**.
(4) **Figures** to the **right** indicate **full marks**.

1. Attempt the following (**any four**) : 20
- (a) Compare Stateful and Stateless server implementations.
 - (b) Explain what is a callback RPC.
 - (c) Compare NOS and DOS.
 - (d) List types of failures in message passing system and how to overcome them.
 - (e) Compare Bully Election Algorithm with Ring based election algorithm.
2. (a) Explain the need of distributed deadlock detection algorithms. Explain probe based distributed deadlock algorithm in detail. 10
- (b) What is a thread and advantages of using threads. What are different models for organizing threads. 10
3. (a) Define Happened-Before relationship. Explain implementation of logical clocks with an example. 10
- (b) Describe .NET architecture with neat labeled diagram. 10
4. (a) What are the reasons for migration of code? Explain the various models for code migration. 10
- (b) Explain Distributed Approach for providing mutual exclusion. 10
5. (a) Explain SOA lifecycle with diagram. Also state the advantages of SOA. 10
- (b) How is sequential consistency model implemented if Replicated Migrating Blocks are used in distributed system for Distributed Shared Memory. 10

TURN OVER

6. Write notes on following :

20

- (a) CORBA Components
 - (b) Components of EJB framework.
 - (c) Explain Message Buffering in IPC
 - (d) .NET architecture
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