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** whereever **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 distibuted 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 peat 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

_____