



(3 Hours)

[Total Marks: 80]

N.B.

- (1) Question No.1 is **compulsory**; solve any **three** questions from **remaining** questions.
- (2) **All** questions carry **equal** marks.
- (3) Specify your answers with neat **diagrams** and **examples** wherever **necessary**.

- | | | | |
|---|---|--|----|
| 1 | a | Explain what is callback RPC. | 05 |
| | b | Components of EJB framework. | 05 |
| | c | Explain Message Buffering in IPC. | 05 |
| | d | Group communication. | 05 |
| 2 | a | What is a thread and advantages of using them? What are different models for organizing threads? | 10 |
| | b | What are the reasons for migration of code? Explain the various models for code migration? | 10 |
| 3 | a | Define Happened- Before Relationship. Explain implementation of logical clocks with an example. | 10 |
| | b | Explain SOA lifecycle with diagram. Also state the advantages of SOA. | 10 |
| 4 | a | Explain with respect to EJB- Roles in EJB and types of Beans. | 10 |
| | b | What is Mutual Exclusion? Explain Distributed Mutual Exclusion algorithm. | 10 |
| 5 | a | Explain RPC Communication Protocol | 10 |
| | b | Describe the different approaches for deadlock detection in a distributed computing system. | 10 |
| 6 | | Write short notes on (Any Four) | 20 |
| | a | RMI Execution | |
| | b | Compare NOS and DOS | |
| | c | Distributed protocols | |
| | d | CORBA Components | |
| | e | Compare Stateful and Stateless server implementations | |
