

TE - SEM: VI - (CBUS) - I.T.

Q.P. Code: 13053

[Time: 3 Hours]

[Marks: 80]

Please check whether you have got the right question paper.

- N.B:
1. Question no 1 is compulsory.
  2. Attempt any three questions out of remaining five.
  3. Figures to the right indicate full marks.
  4. Assume suitable data wherever necessary.

- Q.1 a) What is CORBA? Explain types of method invocation in CORBA. 05  
 b) Explain various kind of message buffering techniques used in IPC. 05  
 c) Explain Cristian's algorithm for distributed clock synchronization. 05  
 d) Explain Stateful and stateless server implementation with an example. 05
- Q.2 a) Explain various transparencies in distributed system. 10  
 b) What is code migration? Explain various approaches to code migration. 10
- Q.3 a) What are characteristics of SOA? Explain SOA life cycle. 10  
 b) What is dead lock? Explain methods for deadlock avoidance. 10
- Q.4 a) What is Mutual Exclusion? Explain Distributed Mutual Exclusion algorithm. 10  
 b) Explain client-centric consistency models in distributed system. 10
- Q.5 a) How is sequential consistency model implemented if Replicated Migrating Blocks are used in distributed shared memory implementation. 10  
 b) Why should we use EJB? Explain the life cycle of different types of beans with proper diagram. 10
- Q.6 White short note on the following: 20  
 a) Different forms of RPC call semantics  
 b) Different distributed deadlock detection algorithms with example.  
 c) The .NET architecture with diagram  
 d) Process migration in heterogeneous system.