

B.E. Eighth Semester (Computer Science & Engineering) (CGS)  
**10355 : Professional Elective - II : Distributed Computing : 8 KS 04**

P. Pages : 2

Time : Three Hours



**AU - 3015**

**Max. Marks : 80**

- Notes : 1. All question carry as indicated marks.  
2. Assume suitable data wherever necessary.  
3. Illustrate your answer necessary with the help of neat sketches.

1. a) Discuss the issues in designing the distributed computing system. **6**  
b) Explain client- server architecture in view of distributed system. **7**

**OR**

2. a) What are the various model in distributed computing system. **7**  
b) How client- server architecture justify the distribution of work in computing environment system. **6**  
3. a) Explain the role of RPC communication in distributed system. **7**  
b) Justify the desirable features required for good message passing system with an example. **7**

**OR**

4. a) Explain implementation of RMI remote method invocation along with parameter passing. **7**  
b) What are the elements of RPC mechanism? Thus explain their role. **7**  
5. a) Why does election algorithm plays an important role in distributed system? Explain and compare bully algorithm. **7**  
b) Give suitable example to show that if any one of necessary conditions for a deadlock is absent, no deadlock is possible. **6**

**OR**

6. a) State and explain Lamport's algorithm for clock synchronization. **6**  
b) Explain mutual exclusion for centralized approach. **7**  
7. a) Discuss the thread usage and explain design issues for threads. **7**  
b) Explain design issues for processor allocation algorithms. **7**

**OR**

8. a) Describe and explain creating a thread when a message arrives. 7  
b) Explain the triple modular redundancy design for fault tolerance. 7
9. a) What is shared memory? Thus explain Ring-Based Multiprocessors and use of Memnet device. 6  
b) Explain heterogeneous distributed shared memory. 7

OR

10. a) State and explain general architecture of distributed shared memory. 7  
b) Discuss the design issues in implementing DSM systems. 6
11. a) What is directory server interface? Explain the structure of directory graph an two machine. 7  
b) What are the distributed file system design principles which lead to improve performance? 6

OR

12. a) What do you mean by shared file in distributed file system? Thus explain session semantics. 6  
b) Describe and explain how does caching memory helps in file management of distributed system. 7

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