M.E. First Semester (Computer Science & Information Technology) (New-CGS)

13180 : Distributed Operating System Design : 1 RNME 2

P. Pages : 2

Time : Three Hours

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AW - 3600

Max. Marks : 80

Notes : 1. Illustrate your answer necessary with the help of neat sketches.
2. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) What is a distributed operating system? Explain how it is different from network operating system. 7

   b) Explain the three tier client server architecture. 7

OR

2. a) Explain the various functions of layers of ATM protocol reference model. 7

   b) What do you mean by VMTP? Explain its working. 7

3. a) What is the need of RPC? Explain its implementation. 7

   b) List the different forms of IPC and explain any one of them. 6

OR

4. a) What is RMI? Explain its working. 6

   b) What is ordered message delivery? Compare the various ordering semantics for message passing. 7

5. a) Explain the different approaches to deadlock handling in distributed operating system. 7

   b) What is the need of logical clock? Explain its working. 6

OR

6. a) Compare centralized and distributed mutual exclusion algorithm. 7

   b) State and explain the election algorithm. 6

7. a) Compare static and dynamic load balancing technique. 7

   b) What is the need of process migration? Explain. 7

OR

8. a) Explain the different issues in designing a thread. 7

   b) What are the different types of faults? Give its classification. 7

9. a) What is a shared memory? Explain its implementation. 7

b) Explain switched multiprocessor based DSM system. 6

OR

10. a) What do you mean by thrashing? Explain how it can be reduced. 7

b) Differentiate between bus and ring based DSM system. 6

11. a) What is the need of a naming system? Explain its desirable features. 6

b) Explain the various types of name caches. 7

OR

12. a) What is the need of hierarchical namespace? Explain various approaches to global naming of objects in hierarchical namespace. 7

b) Differentiate between active and passive attack. 6

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