M.E. First Semester (Computer Science & Information Technology) (New-CGS)
13180 : Distributed Operating System Design : 1 RNME 2

P. Pages : 2

Time : Three Hours

0363

AU - 3431

Max. Marks : 80

Notes :
1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Diagrams and chemical equations should be given wherever necessary.
4. Retain the construction lines.
5. Illustrate your answer necessary with the help of neat sketches.
6. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION – A

1. a) Describe and illustrate the client- server architecture of one or more major internet applications.   6

   b) Explain distributed systems with example also explain it's significant consequences.   7

OR

2. a) Explain what are the challenges in design issues of distributed systems.   7

   b) Differentiate between distributed operating system and network operating system.   6

3. a) What do you mean by RMI? Explain design issues of RMI.   7

   b) Explain the characteristics of inter process communication.   6

OR

4. a) Explain following terms.   8
      i) Datagrams.

      ii) Socket.

      iii) Port.

      iv) XML.

   b) Explain the role of proxy and skeleton in Remote method invocation.   5

5. a) What is dead: lock? Explain deadlock prevention strategies.   7

   b) Explain election algorithm in detail.   7

OR

6. a) Explain the concept of logical clocks with implementation.   7

   b) What is the need of clock synchronization in distributed system?   7

SECTION – B

7. a) Explain load balancing mechanism in distributed operating system. 7

    b) What is threads? Explain Thread design issues in distributed operating system. 7

OR

8. a) Differentiate between Unix and Mach OS in terms of Kernel, system model and process management. 8

    b) Explain process migration in Heterogeneous system. 6

9. a) Differentiate between strict and sequential consistency model with relevant example. 7

    b) Explain the implementation of MRMW protocol in detail. 6

OR

10. a) What is thrashing? Explain the techniques to reduce trashing. 6

    b) Explain design and implementation issues in distributed shared memory. 7

11. a) Differentiate between active attacks and passive attacks with its classification. 7

    b) Explain file service architecture in detail. 6

OR

12. a) Explain NFS architecture in detail. 7

    b) Explain following terms. 6

        i)   URL.

        ii)   DNS.

        iii) GNS.

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