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Total No. of Pages : 02

Total No. of Questions : 08

M.Tech (CSE Engg.) Big Data (PIT) (Sem.-1)

DISTRIBUTED OPERATION SYSTEM

Subject Code : CSB-208

Paper ID : [51086]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.

2. Each question carries TWELVE marks.

1. In your opinion, where (in server memory, in client disk, or in client memory) should a cache for caching data be located in the following type of distributed file systems with reason for the your answer in detail
 - a) One that support diskless workstation.
 - b) One that uses file level transfer model as unit of data access.
 - c) One that uses session semantics.
 - d) One in which ratio of clients to number of file servers is very large.
 - e) One that support client disk.
2.
 - a) A file system allows links from one directly to another. In this way, a directory can "include" a subdirectory. In this context, what is the essential criterion that distinguishes a tree-structured directory system from a general graph-structured system?
 - b) What is a kernel in distributed operating system? Explain with example of an OS.
3.
 - a) In what respect are distributed computing system are better than parallel processing system. Explain
 - b) The terms loosely-coupled system and tightly-coupled system are often used to described distributed computer systems. What is the difference between them?

4.
 - a) Explain the evolution of distributed computing systems.
 - b) Discuss the issues in designing a distributed operating system.
 - c) What is DCE? Discuss about DCE components and DEC cells.
5.
 - a) Explain different issues in message passing system.
 - b) Explain different communication protocol used for RPCs.
 - c) What are the issues in client server binding? Explain how these issues handled in RPC.
6.
 - a) Explain the desirable features of a good global scheduling algorithm.
 - b) Explain load balancing approach.
 - c) Explain process migration mechanisms.
7.
 - a) When a Private workspace .is used to implement transactions, it may happen that a large number of file indices must be copied back to the parent's workspace. How can this be done without introducing race conditions?
 - b) Discuss the Intel Architecture for the implementation of Unix operating system File System.
8. Write short notes on :
 - a) Inter process Communication ports and its implementation.
 - b) Demand paging strategies.