

Roll No.

Total No. of Questions : 08]

[Total No. of Pages : 02

Paper ID [CS504]

(Please fill this Paper ID in OMR Sheet)

M.Tech.

DISTRIBUTED SYSTEM (CS-504)

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) All questions carry equal marks.

Q1) a) In a certain workstation-based system, the workstations have local disks that hold the system binaries. When a new binary is released, it is sent to each workstations. However, some workstations may be down (or switched off) when this happens. Devise an procedure that allows the updating to be done automatically, even though workstations are occasionally down.

b) The terms loosely-coupled system and tightly-coupled system are often used to describe distributed computer systems. What is the different between them.

Q2) 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) What is a kernel in distributed operating system. Explain with example of an OS.

Q3) a) What are the feature of CORBA. Discuss

b) Why do stateless servers have to include a file offset in each request? I this also needed for stateful servers?

Q4) a) What is the difference between a file service using the upload/download model and one using the remote access model.

b) 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?

- Q5)** a) Name two useful properties that immutable files have.
- b) Why do some distributed systems use two-level naming?

- Q6)** a) How resource management is done in a distributed multimedia system. Explain
- b) How memory management is done in a distributed system. Explain with the help of an example.

Q7) What is a deadlock in distributed systems. How it can be prevented.

- Q8)** Write short notes on
- a) Client server Communication
- b) Distributed transactions