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Total No. of Questions : 08] [Total No. of Pages : 02

M.Tech. (Sem. - 2nd)

DISTRIBUTED SYSTEMS

SUBJECT CODE : CS - 504

Paper ID : [E0684]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours **Maximum Marks : 100**

Instruction to Candidates:

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

Q1) (a) Make a general architectural diagram of distributed systems and discuss various components of the architecture.

(b) Discuss various methods for interprocess communication. Explain with the help of example.

Q2) (a) What you understand by a stub and Skelton. How it helps in communication between various components in a heterogeneous system.

(b) How we invoke remote objects with the help of Java RMI. How messages are passed between remote objects.

Q3) (a) Discuss different types of support required/provided from the operating system for the successful implementation of distributed system.

(b) Explain in detail Andrew file system.

Q4) Explain the following in detail :

(a) Global Name Service.

(b) Domain name system.

(c) Directory services.

(d) CORBA.

Q5) Discuss the following in context of distributed systems :

(a) Multiple granularity locking.

(b) Timestamp ordering.

(c) Multiversion.

(d) Data Independence.

Q6) (a) Differentiate Flat and nested distributed transaction.

(b) How quality of service is managed in distributed multimedia system.

Q7) (a) Discuss Tiger video file server for distributed multimedia systems.

(b) Explain in detail Atomic commit protocol.

Q8) (a) More and more systems are becoming distributed and handling distributed transactions. What are the various guidelines that should be kept in mind in context of security and robustness of such systems?

(b) How to deal with distributed deadlocks to avoid any interruption in customer services.

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