

8E8163

Roll No. _____

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B. Tech. VIII Sem. (Main / Back) Exam., April – May 2018
Computer Science & Engineering
8CS3A Distributed Systems

Time: 3 Hours

Maximum Marks: 80
Min. Passing Marks: 26

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/calculated must be stated clearly.

1. NIL

2. NIL

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UNIT-I

Q.1 Explain Architectural Models for distributed system along with the challenges of distributed systems. [16]

OR

Q.1 (a) Explain design issues in distributed operating system. [8]

(b) Write short note on Distributed Computing Environment. [8]

UNIT-II

Q.2 (a) Explain the concept of processes and threads. [8]

(b) State and explain the characteristics of concurrent programming languages. [8]

OR

Q.2 (a) Explain design and implementation issues in Remote method invocation (RMI) [10]

(b) Explain the concept of RPC in detail. [6]

UNIT-III

Q.3 Explain dynamic load sharing and balancing methods in detail along with appropriate example. [16]

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OR

Q.3 (a) What is distributed file system? Explain the concept of transaction service and concurrency control in detail. [10]

(b) Write short note on data and file replication. <http://www.rtuonline.com> [6]

UNIT-IV

Q.4 (a) Explain DSM systems along with their implementations and applications. [10]

(b) Describe the concept of deadlocks in distributed systems. [6]

OR

Q.4 Explain the following-

(a) Distributed mutual exclusion [8]

(b) Distributed termination detection [8]

UNIT-V

- Q.5 (a) Explain the concepts of fault, Failure and recovery in distributed systems. [8]
- (b) State and explain various issues of replicated data management. [8]

OR

Q.5 Explain following in detail

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- (a) CORBA services. [8]
- (b) Impossibility of consensus and randomized Distributed Agreement. [8]