TCS-801/TIT-801

(Following Paper ID and	l Roll No. to l	oe filled i	n you	r Answ	er Bo	ok)
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B.Tech.

(SEM VIII) EVEN SEMESTER THEORY EXAMINATION, 2009-2010

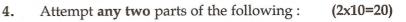
DISTRIBUTED SYSTEMS

Time: 3 Hours Total Marks: 100

Note: Attempt all the questions.

- 1. Do any four parts of the following: (4x5=20)
 - (a) How the resource sharing done in distributed system? Explain with an example.
 - (b) Discuss the limitation of distributed system.
 - (c) What do you mean by Global state of the distributed system? Also explain the main features of consistent Global state.
 - (d) Differentiate between Token based algorithm and non token based algorithm.
 - (e) Explain the classification of distributed mutual exclusion.
 - (f) Discuss the web challenges for implementing distributed system.

- 2. Attempt any two parts of the following: (2x10=20)
 - (a) Define deadlocks. Differentiate between resource and communication Deadlocks. Discuss various deadlock handling strategies in detail.
 - (b) Write short notes on following:
 - (i) Wait for graph
 - (ii) Atomic commit in distributed database systems.
 - (c) Explain Lamport Shostak Pease algorithm (Oral Message Algorithm) for 3 m+1 or more processors where m is the no. of faulty processors.
- 3. Attempt any two parts of following: (2x10=20)
 - (a) (i) What is the communication models proposed for the communication between the distributed objects?
 - (ii) Explain following with an example:
 - (A) Remote object reference
 - (B) Remote interface
 - (b) What are the public and private keys? List the key differences and issue in public keys cryptography and private key cryptography
 - (c) Write short notes on following:
 - (i) Architecture of distributed Event Notification.
 - (ii) Remote procedure call.



- (a) Compare and contrast the methods of concurrency control for transactions. Explain the methods for concurrency control in distributed transactions.
- (b) What do you mean by two phase Locking? How it is different from strict two phase Locking? Explain.
- (c) Explain the following:
 - (i) Fault tolerant services
 - (ii) Highly available services.
- 5. Attempt any two parts of the following: (2x10=20)
 - (a) Explain the term "routing". How routing problem can be classified? Also Discuss the criterion for good routing algorithms.
 - (b) (i) What are traversal algorithms?

 Discuss the properties of this algorithm.
 - (ii) Explain Tarry's algorithm for traversing connected networks.
 - (c) Write short notes on following:
 - (i) CORBA services
 - (ii) Deadlock free packet switching

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