# Code No. 2184

## FACULTY OF ENGINEERING

**B.E. 4/4 (CSE) I-Semester (Main) Examination, November / December 2012**

**Subject: Distributed Systems**

**Time : 3 Hours Max. Marks: 75**

***Note:*** *Answer* ***all*** *questions of Part - A and answer any* ***five*** *questions from Part-B.*

**PART – A (25 Marks)**

1. Differentiate between distributed system and computer Network. (3)

2. What are the types of failures? (2)

3. What is the use of Events and Notifications in Distributed system? (2)

4. What properties should be satisfied for Reliable Multicast? (3)

5. What is strongly consistent Global state in distributed systems? (2)

6. What is meant by name Resolution? What are the differences in iterative

and recursive name resolution approaches? (3)

7. What is "lost update" problem? What are its implications? (2)

8. What do you mean by weak consistency of shared memory? How is it

different from sequential consistency? (3)

9. What is phantom deadlock? (3)

10. What are the uses of Replication? (2)

**PART – B (5x10=50 Marks)**

11. List out the challenges of distributed system. Explain in detail. (10)

12.(a) How does the communication take place in between distributed objects?

Explain. (7)

(b) What is Marshalling? (3)

13.(a) How do you create a new process in a distributed system? Explain. (5)

(b) How is the Directory service implemented in distributed systems? (5)

14.(a) Explain the concept of Lamport's Totally ordered logical clocks. (5)

(b) What is an election algorithm? Explain with example. (5)

..2

# Code No. 2184

..2..

15. How can we achieve the concurrency control in distributed transactions?

Explain in detail. (10)

16.(a) Explain passive replication for fault tolerant . (5)

(b) Explain the systems differences between use of distributed shared memory versus message passing approach to programming. (5)

17. Write short notes on : (5+5)

(a) Distributed file system architectures

(b) Consensus in synchronous systems

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