

8E5003

Roll No. : \_\_\_\_\_

Total Printed Pages : 2

**8E5003**

B. Tech. (Sem. VIII) (Main) Examination, April/May-2012  
Computer Science  
8CS3 Distributed Systems

Time : 3 Hours]

[Total Marks : 80  
[Min. Passing Marks : 24

*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.*

Use of following supporting material is permitted during examination.  
(Mentioned in form No. 205)

1. \_\_\_\_\_ Nil \_\_\_\_\_

2. \_\_\_\_\_ Nil \_\_\_\_\_

### UNIT - I

1 Explain different types of operating systems in detail. 16

OR

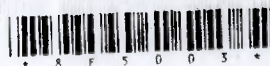
- 1 (a) What do you mean by distributed computing environment (DCE) ? Explain its features, services and goals. 8
- (b) What do you mean by state recording of distributed system ? Explain your answer using Chandy-La-inport's algorithm. 8

### UNIT - II

- 2 (a) Explain client server model is distributed system. 8
- (b) Explain the difference between message passing and shared variable synchronization. 8

OR

8E5003]



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[Contd...

- 2 (a) What is RPC ? Explain its protocol and working. 8  
(b) Write short notes on Java RMI case study. 8

### UNIT - III

- 3 (a) What is static process scheduling ? Write the advantages of static process scheduling. 8  
(b) What do you mean by distributed file system ? Explain its design and implementation. 8

OR

- 3 (a) Discuss transaction services and concurrency control in detail. 8  
(b) Write short notes on :  
(i) Sun network file system  
(ii) Code file system. 8

### UNIT - IV

- 4 (a) Explain different DSM implementation approaches. 8  
(b) Define consistency. Explain various consistency models. 8

OR

- 4 (a) List and explain distributed deadlock detection algorithm. 10  
(b) Explain mutual exclusion algorithm with example. 6

### UNIT - V

- 5 (a) Explain the concept of fault, failure and recovery. 8  
(b) Explain replication of data in detail. Also give its classification. 8

OR

- 5 Discuss CORBA case study in detail. 16

