UG/PG Even Semester Examination, 2025

COMPUTER SCIENCE

(10th Semester)

Course No.: MCS-1001

(Distributed Computing)

Full Marks: 70

Pass Marks: 28

Time: 3 hours

The figures in the right margin indicate full marks for the question. Answer any five questions selecting one from each unit.

UNIT-I

1. What are the Issues in design of a distributed operating system? Explain the Client Server architecture 7+7=14

2. Write short notes on: 3.5x4=14

   i. Good message passing system.

   ii. Encoding & decoding techniques.

   iii. Remote procedure calls (RPC).

   iv. Lightweight RPC.

UNIT-II

3. Explain the architecture of Distributed Shared Memory. What are its advantages? 7+7=14

4. What is Mutual Exclusion and Deadlock? What are the Conditions, Avoidance, Prevention, Recovery methods from Deadlock? 14

Turn Over

UNIT-III

5. What are features of a good scheduling algorithm? What is Task assignment approach? 14

6. Write short notes on 3.5x4=14

   i. Load balancing & load sharing approach

   ii. Process management

   iii. Process migration

   iv. Threads

UNIT-IV

7. What are the features and models of Distributed File Systems. 6+8=14

8. What do you mean by Distributed File Servers, Distributed Real Time System 7+7=14

UNIT-V

9. Potential attacks to computer system, Cryptography, Authentication, digital signatures, Access Control. 7+7=14

10. What is concurrency Control in distributed database? What do you mean by System oriented names, Human oriented names, Name caches? 7+7=14

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