6E7136

Total No. of Questions : 22 Total No. of Pages : 04

Roll No. : .....

6E7136

B.Tech. VI-Sem. (Main/Back) Exam. - 2024

COMPUTER SCIENCE AND ENGINEERING

6CS5-11 / Distributed System (EI.-I)

CS, IT

Time : 3 Hours Maximum Marks : 70

Instructions to Candidates :

Attempt all ten questions from Part-A, five questions out of seven questions from Part-B and three questions out of five questions from Part-C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may 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. .....

2. .....

PART-A **[10×2=20]**

(Answer should be given up to 25 words only)

All questions are compulsory

Q.1. What is a distributed system?

Q.2 Define distributed computing environment (DCE).

Q.3. Define Inter-process Communication.

Q.4. What are RMI and RPC?

Q.5. Define distributed file system.

Q.6. What is threshold?

Q.7. What is the difference between shared memory and distributed memory?

Q.8. Which two instructions are required to perform hardware support for mutual exclusion?

Q.9. Define distributed deadlock.

Q.10. What are the disadvantages of Active Replication in distributed systems?

PART-B

[5x4=20]

(Analytical/Problem solving questions)

Attempt any five questions

Q.1. Briefly explain the disadvantages of distributed system.

Q.2 Compare synchronous versus asynchronous execution.

Q.3. Distinguish between physical clock and logical clock.

Q.4. Explain different kinds of problems that are associated with the coordination and agreement in distributed system.

Q.5. Briefly explain the issues in concurrency control in a distributed system.

Q.6. Briefly explain fault, errors, and failure in distributed system.

Q.7. What do you understand by Byzantine Agreement? Explain.

PART-C [3x10=30]

(Descriptive/Analytical/Problem Solving/Design questions)

Attempt any three questions

Q.1. Explain the need of Distributed system and also explain its characteristics with example.

Q.2 Explain client-server communication model on RPC and its message passing.

Q.3. What is distributed process implementation and also explain static process scheduling with communication?

Q.4. What are the design and implementation issues in distributed shared memory?

Q.5. Explain CORBA Interface Definitions Languages.

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