Code No: 155EY **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, March - 2024
DISTRIBUTED SYSTEMS
(Computer Science and Engineering – Networks)

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

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	Write a short note on resource sharing.	[2]
b)	Give a brief note on RPC.	[3]
c)	Define file service.	[2]
d)	How does the OS provide protection?	[3]
e)	What is tapestry?	[2]
f)	Write short notes on ocean store.	[3]
g)	What is a Transaction?	[2]
h)	Give a brief note on Atomic commit protocol.	[3]
i)	Define virtual memory.	[2]
j)	What is the advantage of fault tolerance?	[3]

PART – B

(50 Marks)

2.a) List and explain the various challenges in distributed systems.
b) Discuss in brief about Inter process communication. [5+5]

OR

3. Explain in detail with a neat sketch the architectural and fundamental models of distributed systems. [10]

4.a) Discuss in detail about the Communication and Invocation in OS.
b) Describe in brief the processes and threads in OS. [5+5]

OR

5. Explain in detail with a neat sketch the architecture of OS. [10]

6.a) Summarize the concept of peer to peer middle ware technique.
b) Discuss in detail Synchronizing physical clocks in peer to peer systems. [5+5]

OR

7. Write short notes on following:
a) Clocks
b) Events
c) Process states. [4+3+3]

8.a) Discuss in detail about optimistic concurrency control in transaction.
b) Explain in detail about timestamp ordering protocol. [5+5]

OR

9. Illustrate the concepts of Flat and Nested Distributed Transactions. [10]

10. Discuss in detail the procedure for the implementation of transactions with replicated data. Explain with a suitable example. [10]

OR

11.a) Explain in detail about system model and group communication.
b) Discuss in brief about consistency models. [5+5]

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