Code No: 155EY **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, January/February - 2023
DISTRIBUTED SYSTEMS
(Computer Science and Engineering – Cyber Security)

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)	Define fault tolerance in distributed systems.	[2]
b)	Differentiate between buffering and caching.	[3]
c)	What is the copy-on-write principle?	[2]
d)	What is the response of cthread_yield command?	[3]
e)	List the capabilities of 'pastry'.	[2]
f)	List the features of Napster network.	[3]
g)	What is the distributed deadlock?	[2]
h)	What are flat transactions?	[3]
i)	What is Byzantine failure?	[2]
j)	Define page based and library based DSM (Distributes shared memory).	[3]

PART – B

(50 Marks)

2. Discuss the basic design issues of distributed systems. [10]

OR

3. Summarize the "OSI protocol stack". [10]

4. What are threads? Discuss thread scheduling and thread implementation. [10]

OR

5. Write about distributed file services design issues and file service components. [10]

6. Write short notes on the following.
a) Routing overlays
b) Overlay networking and IP routing. [5+5]

OR

7. Illustrate the concept of logical time and implementation of logical clocks in distributed systems. [10]

8. Describe the deadlock handling techniques in distributed transactions. [10]

OR

9. What are distributed transactions? Explain about nested transactions. [10]

10. Explain the design and implementation issues of distributed shared memory. [10]

OR

11. Explain various consistency models. [10]

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