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Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)

M.Tech. (Second Semester - Regular) Examinations, May – 2026

24MCSPE12002 – Distributed System



Time: 3 hrs

Maximum: 60 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. Name the different types of switching techniques.	CO1	K1
b. What are the different data representation methods used in message passing?	CO2	K1
c. Compare DSM with traditional message-passing systems.	CO3	K1
d. Illustrate event ordering.	CO4	K1
e. Define is file replication.	CO6	K1

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. Discuss the major design issues in Distributed Systems.	5	CO1	K3
b. Explain the role of communication protocols in distributed systems.	5	CO1	K2
(OR)			
c. Explain the client–server model with a neat diagram and example.	5	CO1	K2
d. Explain the concept of Asynchronous Transfer Mode and its key features.	5	CO1	K1
3.a. Describe the characteristics of a good message passing system.	5	CO2	K2
b. What is buffering? Explain different buffering strategies.	5	CO2	K2
(OR)			
c. Explain client-server binding in RPC.	5	CO2	K3
d. What are multi-datagram messages? Explain.	5	CO2	K2
4.a. Discuss design issues in DSM.	5	CO3	K3
b. What is granularity in DSM? Explain.	5	CO3	K1
(OR)			
c. Explain different consistency models in DSM.	5	CO3	K3
d. Explain heterogeneous DSM.	5	CO3	K2
5.a. Explain clock synchronization in distributed systems.	5	CO4	K2
b. Describe in detail about mutual exclusion in distributed systems.	5	CO5	K2
(OR)			
c. Explain logical clocks with an example.	5	CO4	K2
d. Describe the Token Ring algorithm.	5	CO5	K3
6.a. Discuss about remote file access.	5	CO6	K2
b. Explain different file models in DFS.	5	CO6	K3
(OR)			
c. Describe the concept remote file access.	5	CO6	K2
d. What are atomic transactions? Explain	5	CO6	K1

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