

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the trends in distributed systems with suitable examples.	13	K2	CO1
	(OR)			
b)	Describe in detail the concept of inter-process communication and external data representation.	13	K2	CO1
12. a)	Explain the request-reply protocol in Remote Method Invocation.	13	K2	CO2
	(OR)			
b)	Analyze the shared memory approaches in communication and their challenges.	13	K2	CO2
13. a)	Summarize the evolution of peer-to-peer systems with reference to Napster and its legacy.	13	K1	CO3
	(OR)			
b)	Examine distributed file systems and explain file service architecture in detail.	13	K1	CO3
14. a)	Discuss distributed mutual exclusion algorithms and their applications.	13	K2	CO4
	(OR)			
b)	Analyze flat and nested distributed transactions with examples.	13	K2	CO4
15. a)	Illustrate the concept of fault-tolerant services with passive replication.	13	K3	CO5
	(OR)			
b)	Describe the role of digital signatures in securing distributed systems.	13	K2	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	Consider a distributed banking system where multiple branches need synchronized access to customer account data. Propose a suitable synchronization mechanism and explain how replication and security can ensure consistency and fault tolerance.	15	K2	CO4
	(OR)			
b)	In the context of cloud-based file sharing (like Google Drive), analyze how inter-process communication, peer-to-peer services, and replication models collectively ensure reliability, availability, and security.	15	K3	CO5