



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
 [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
 Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 60014

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025
 Seventh Semester
 Information Technology
 U19ITV42 – INFORMATION STORAGE AND MANAGEMENT
 (Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	State the role of host/compute in a data center.	2	K1	CO1
2.	How does virtualization improve resource utilization in a data center?	2	K2	CO1
3.	Define the term “Converged Network Adapter (CNA).	2	K1	CO2
4.	Write about zoning and its role in storage network.	2	K1	CO2
5.	State the importance of business impact analysis in organizations.	2	K1	CO3
6.	Write about live migration and its advantages.	2	K1	CO3
7.	Mention standards commonly used in information security framework.	2	K2	CO4
8.	Highlight key security challenges faced in virtualized storage infrastructures.	2	K2	CO4
9.	Outline procedures for performance monitoring of storage devices.	2	K2	CO5
10.	Mention the concept of storage tiering and its purpose in storage infrastructure.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the various RAID levels (RAID 0, RAID 1, RAID 5, RAID 6, and RAID 10) with neat diagrams. Discuss their working principles, advantages, and disadvantages with respect to performance, cost, and fault tolerance.	13	K2	CO1

		(OR)			
	b)	Illustrate the components of an Intelligent Storage System with neat diagram and describe the functions of Front-end, Cache, Back-end, and Physical disks.	13	K2	CO1
12.	a)	Discuss the Fibre Channel addressing scheme. Describe the addressing operations used in FC networks and their role in ensuring reliable communication.	13	K2	CO2
		(OR)			
	b)	Describe the iSCSI and FCIP protocols for storage access over IP networks. Discuss their architecture, working, and advantages in providing reliable storage connectivity.	13	K2	CO2
13.	a)	Explain the stages of the Business Continuity (BC) Planning Life Cycle with neat diagram. Discuss the importance of each stage in ensuring uninterrupted business operations.	13	K2	CO3
		(OR)			
	b)	Discuss the role of Data Archiving in enterprise storage systems. Explain the methods and benefits of implementing archival solutions.	13	K2	CO3
14.	a)	Demonstrate how the Risk Triad can be implemented in cloud-based storage systems. Propose practical measures for ensuring data protection.	13	K3	CO4
		(OR)			
	b)	Apply authentication and encryption to secure a NAS environment and explain how it protects data.	13	K3	CO4
15.	a)	Interpret the common challenges faced in Storage Infrastructure Management. Explain how these challenges can be addressed with suitable examples.	13	K2	CO5
		(OR)			
	b)	Illustrate the concept of Information Lifecycle Management (ILM) with diagram. Interpret its stages and significance in managing enterprise data efficiently.	13	K2	CO5

PART – C

			(1 x 15 = 15Marks)		
Q.No.	Questions	Marks	KL	CO	
16.	a) An e-commerce platform is planning a storage upgrade to handle high festive season traffic. Discuss in detail how the components of an intelligent storage system (front-end, cache, back-end, physical disk) can be optimized to improve transaction response time. Provide a design recommendation with reasoning.	15	K2	CO1	
					(OR)
	b) Evaluate the process of developing “Idea Solutions” for storage management. How do these solutions address scalability, automation, and efficiency challenges in modern data centers?	15	K3	CO4	