

UNIT 3

1. Explain the various variations of the Core-Edge Fabric topology with the help of a diagram.
2. Explain the Fibre Channel Protocol Stack and key advantages of FCP.
3. Briefly explain the process of zoning in an FC network and illustrate the different types of zoning with a diagram.
4. Compare the network infrastructure before and after implementing FCoE (Fibre Channel over Ethernet).
5. Explain Multimode fiber and single-mode fiber
6. Illustrate the basic interconnectivity options supported by Fibre Channel architecture with a diagram.
7. Discuss the importance and functions of different layers in the iSCSI Protocol Stack.
8. Explain the flow control mechanism in a Fibre Channel (FC) network.
9. Describe the process of congestion notification and its management in a network with a diagram.
10. Explain two topologies of iSCSI implementations and their significance.
11. With a diagram, describe the different variations of the Core-Edge Fabric topology.
12. Explain the Fibre Channel Protocol Stack and discuss the different port types in a switched fabric.
13. Explain F-Port and N-Port
14. Explain Multimode fiber and single-mode fiber.
15. A company initially connected their server and storage using a simple point-to-point FC link. As storage grew, they shifted to an arbitrated loop, and now they want to scale to hundreds of nodes with minimal downtime. Analyze the limitations they faced in the earlier connectivity models and justify why a switched fabric architecture is most appropriate for their current needs.

UNIT 4

1. Describe the file-serving environment prior to and after the implementation of file-level virtualization.
2. Explain why Content Addressed Storage (CAS) features are essential for storing fixed content effectively.
3. The IT department of a department store currently uses tape for data archiving. What are four to five key points you would present to persuade them to adopt a CAS solution instead? How would implementing these suggestions impact the IT department?
4. Describe the process of storing and retrieving objects in an Object-Based Storage Device (OBSD).
5. Describe six factors that can influence the performance of Network Attached Storage (NAS)
6. Explain the working of an I/O operation in NAS and list the benefits of using NAS.
7. Explain Content-Addressed Storage, and its key features?

8. Explain the components of NAS, with neat diagram.
9. Describe the components of an Object-Based Storage Device (OSD) with the aid of a neat diagram.
10. NAS implementations
11. Compare the benefits of Network-attached storage with General purpose server.
12. How does the use of jumbo frames affect the NAS performance?
13. Compare Block-level access versus object-level access.
14. Define Content Addressed Storage (CAS)? Explain any four key features of the same.
15. Explain the process of storing and retrieving objects from Object- based Storage Device

UNIT 5

1. A storage array dials a support center automatically whenever an error is detected. The vendor representative at the support center can log on to the service processor of the storage array through the Internet to perform diagnostics and repair. Discuss the security concerns in this environment and provide security methods that can be implemented to mitigate any malicious attacks through this gateway.
2. Analyze and discuss the three key elements of the risk triad.
3. A system has three components and requires all three to function during business hours (8 AM to 5 PM, Monday to Friday). Failures for Component 2 occur as follows:
 - Monday: 8 AM to 11 AM
 - Tuesday: No failure
 - Wednesday: 4 PM to 7 PM
 - Thursday: 5 PM to 8 PM
 - Friday: 1 PM to 2 PM

Calculate the Mean Time Between Failures (MTBF), Mean Time to Repair (MTTR), and the availability of Component 2.

4. Identify the various purpose of Backups.
5. Illustrate the implementation of a fault tolerance model to mitigate single-point failures, including an example.
6. Describe the activities involved in storage infrastructure management in detail, providing relevant examples for better understanding.
7. Explain the Business Continuity (BC) planning lifecycle with the help of a clear and well-labeled diagram.
8. Provide an example to illustrate the importance of monitoring security in a storage array, including a neat and labeled diagram
9. Justify how implementing an ILM strategy will directly address the challenges of information management
 - a. Security threats in a management access domain
 - b. Securing the Application Access Domain
10. Explain Information Lifecycle Management
11. Discuss the key storage infrastructure management activities in a data center