

GOPALAN COLLEGE OF ENGINEERING & MANAGEMENT

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

STORAGE AREA NETWORKS (18CS822)

MODULE WISE QUESTIONS

Module – 1

1. What is Data. Explain the factors that contribute the growth of Digital data. With diagram explain types of Data.[8 MARKS]
2. With diagram explain Evolution of Storage Architecture. [8 MARKS]
3. What are Core Elements of Data Center , with diagram give an example of online order transaction system. Explain the key characteristics of a Data Center. [10 MARKS]
4. What is Device Driver.With diagram explain Disk Partitioning and Concatenation. [8 MARKS]
5. What is File System .with diagram explain process of mapping user files to disk storage. [8 MARKS]
6. Explain how to compute virtualization with server virtualization diagram. [8 MARKS]
7. What is Connectivity ? i)explain physical components of connectivity with diagram
ii)explain interface protocols. [12 MARKS]
8. With neat diagram explain Disk Drive Components. [12 MARKS]
9. Explain about Zone-bit Recording and Logical Block Addressing with diagram. [8 MARKS]
10. Write a note on Disk Drive Performance[8 MARKS]
11. What is Seek Time , explain its specifications. [4 MARKS]
12. Write a note on Disk I/O controller utilization[4 MARKS]
13. With diagram explain Host-Access to Storage. [8 MARKS]
14. What is DAS. Explain Internal and external DAS architecture also List DAS Benefits and Limitations[10 MARKS]

Module – 2

1. Explain about RAID Implementation Methods[8 MARKS]
2. Explain RAID Techniques in detail with diagram. [10 MARKS]
3. With neat diagram explain different RAID Levels. [12 MARKS]
4. What is Intelligent Storage system. Explain Components of Intelligent Storage System. 10M
5. What is Cache .Explain Structure of Cache and also explain Read Write Operation with Cache 8M
6. What is Flushing .Explain types of Flushing . 4M
7. Explain Types of Intelligent Storage Systems 10M
8. With diagram explain FC SAN implementation and FC SAN evolution. [8 MARKS]

9. Explain with neat diagram about Components of FC SAN. 10M

Module-3

1. Explain iSCSI with implementation diagram .Explain its Components and Host Connectivity.8M
2. Explain iSCSI Topologies with neat diagram.8 M
3. Explain iSCSI Protocol Stack and iSCSI PDU with neat diagram. 10M
4. Write a note on iSCSI Discovery , iSCSI Names. 4M
5. Explain FCIP Protocol Stack with Encapsulation and FCIP topology. 10M
6. What is Network-Attached Storage(NAS).Explain Components of NAS with diagram and also explain Benefits of NAS. 10M
7. Explain NAS I/O Operation with diagram. [4 MARKS]
8. Explain in detail about NAS Implementations[8 MARKS]
9. Explain NAS File-Sharing Protocols. 10M
10. Write a note on Factors Affecting NAS Performance. [5 MARKS]

Module – 4

1. What is Information availability (IA) .What are the Causes of Information Unavailability.? [8 MARKS]
2. How to do Measure Information Availability with diagram.? [4 MARKS]
3. Write a note on Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR). [4 MARKS]
4. What is Business Continuity? Explain BC Planning Life Cycle with diagram. [8 MARKS]
5. Explain Single Pont of Failure with diagram, also explain how to Resolve Single Points of Failure with neat diagram. [8 MARKS]
6. Write a note on Business Impact Analysis and BC Technology Solutions. [8 MARKS]
7. Explain with diagram about Backup Granularity with different levels ,also explain how to Restore from Incremental and Cumulative Backup. [12 MARKS]
8. Explain Backup Architecture with diagram. [4 MARKS]
9. Explain in detail about Backup and Restore Operations. [8 MARKS]
10. List all Backup Technologies and explain each technologies with diagram. [12 MARKS]
11. Explain about backup in NAS Environments(all four methods) [12 MARKS]

Module-5

1. What is Local Replication .Explain about Consistency of a Replicated File System and Consistency of a Replicated Database. [12 MARKS]
2. Explain about Host-Based Local Replication and Storage Array-Based Local Replication with diagram. [12 MARKS]
3. Explain about Tracking Changes to source and Replica 4M

4. Explain about Creating Multiple Replicas. 4M
5. Explain the Modes of Remote Replication(synchronous and asynchronous.) [8 MARKS]
6. Explain Remote Replication Technologies(Host-Based Remote Replication, Storage Array-Based Remote Replication, Network-Based Remote Replication). [12 MARKS]
7. Write a note on Risk Triad. [4 MARKS]
8. Explain in detail about Securing the applications Access Domain and Securing the Management Access Domain. [12 MARKS]
9. Explain FC SAN ,NAS , IP SAN Security Architecture for Security Implementations in Storage Networking. [12 MARKS]
10. Write a note on Kerberos.[4 MARKS]