USN | | | | | | | | | | | **18CS822**

# Eighth Semester B.E. Degree Examination, July/August 2022
## Storage Area Networks

Time: 3 hrs.                                                                    Max. Marks: 100

**Note:** *Answer any FIVE full questions, choosing ONE full question from each module.*

## Module-1

1  a. Explain the core elements of data centre along with its key characteristics. **(10 Marks)**
   b. Discuss the process of host access to storage. **(06 Marks)**
   c. Write a short note on evolution of storage architecture. **(04 Marks)**

### OR

2  a. Explain in detail disk drive components with suitable diagram. **(10 Marks)**
   b. Discuss the concept of DAS with advantages and disadvantages. **(06 Marks)**
   c. Explain disk partitioning and concatenation. **(04 Marks)**

## Module-2

3  a. What is RAID? List different RAID levels where parity technique has been adopted. Explain nested RAID, RAID 3, RAID 5 with diagram. **(10 Marks)**
   b. Write a short note on :    i) Node ports        ii) Cable and connectors. **(06 Marks)**
   c. Discuss RAID impact on disk performance. **(04 Marks)**

### OR

4  a. Explain structure of cache with operations. **(10 Marks)**
   b. List and explain RAID techniques. **(06 Marks)**
   c. List types of intelligent storage systems and explain any one in detail. **(04 Marks)**

## Module-3

5  a. Write a note on iSCSI and its topologies. **(08 Marks)**
   b. Explain the advantages of NAS. **(08 Marks)**
   c. Compare CIFS and NFS protocols. **(04 Marks)**

### OR

6  a. Explain fibre channel protocol stack with neat diagram and write a short note on its performance and security. **(08 Marks)**
   b. Explain NAS components with diagram. **(06 Marks)**
   c. With a neat diagram explain Gateway network attached storage connectivity. **(06 Marks)**

## Module-4

7  a. Discuss the life cycle of BC Planning. **(10 Marks)**
   b. List some important BC technology solutions. Explain the failure analysis in BC. **(10 Marks)**

### OR

8  a. Describe backup and restore operation. **(10 Marks)**
   b. Write a short note on :    i) Backup architecture  ii) Backup purpose. **(10 Marks)**

## Module-5

9  a. Mention major local replication technologies. Explain network based local replication. **(10 Marks)**
   b. Discuss flushing the file system buffer. **(05 Marks)**
   c. Explain the uses of local Replicas. **(05 Marks)**

### OR

10 a. Write a short note on array based synchronous remote replication. **(06 Marks)**
   b. Explain security threats in backup, replication and archieve environment. **(06 Marks)**
   c. Write a note on :  i) Assets    ii) Vulnerability. **(08 Marks)**

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