CBCS SCHEME

18MCA554

Fifth Semester MCA 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. Discuss core elements of data center and key characteristics of data centre. Briefly explain with an order processing system. **(10 Marks)**
   b. Explain the evolution of storage technology with a neat diagram. **(10 Marks)**

OR

2 a. What is file system? Explain the process of mapping user files to disk storage. **(10 Marks)**
   b. Explain briefly about information life cycle management. **(10 Marks)**

Module-2

3 a. Compare RAID0, RAID1, RAID1+0 and RAID0+1 based on storage efficiency, read performance write performance and write penalty. **(10 Marks)**
   b. Differentiate between hardware and software RAID, Illustrate how parity method is used for RAID levels. **(10 Marks)**

OR

4 a. With a neat diagram, explain ISS. Explain in detail the cache component of ISS. **(10 Marks)**
   b. What is DAS? Explain types, benefits and limitations. **(10 Marks)**

Module-3

5 a. Explain with a neat diagram the components of Fibre Channel (FC) storage Area Networks. **(10 Marks)**
   b. What are the different types of port available in Fibre channel? Also mention it uses. **(10 Marks)**

OR

6 a. What is zoning? What are the advantages of zoning? Explain the various types of zoning. **(10 Marks)**
   b. Explain FC topologies. **(10 Marks)**

Module-4

7 a. List the key features of CAS. Illustrate with a neat diagram the architecture for CAS system. **(10 Marks)**
   b. Differentiate and explain the NAS file sharing protocols. **(10 Marks)**

OR

8 a. Explain object storage and retrieval in CAS, with suitable diagram. **(10 Marks)**
   b. Define Archives. Explain different types of Archives with an example. **(10 Marks)**

Module-5

9 a. Differentiate and explain server based backup, NAS environment and server-less backup is NAS environment. **(10 Marks)**
   b. Describe the failure analysis in BC. Briefly explain BC technology solution. **(10 Marks)**

OR

10 a. With a neat diagram, explain the steps involved in backup and restore operation. **(10 Marks)**
   b. Explain different modes of Remote Replication. **(10 Marks)**

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