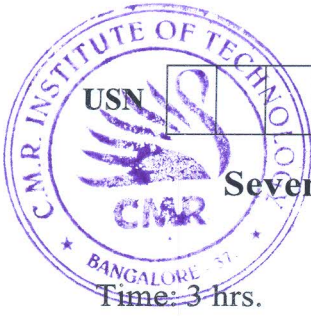


CBCS SCHEME



17CS754

Seventh Semester B.E. Degree Examination, June/July 2023 Storage Area Networks

Time: 3 hrs.

Max. Marks: 100

- Note:** 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. No Handbook/Charts/Tables required.

Module-1

- 1 a. Define a data center? Explain the 5 core elements required for the basic functionality of a data center with its functionality. (10 Marks)
b. What are the types of data? Explain the key characteristics of data center elements with a neat diagram. (10 Marks)

OR

- 2 a. Outline the RAID Implementation methods and briefly explain the working of the same. (10 Marks)
b. Write a short note on the following :
i) Striping
ii) Microcoring
iii) Parity
Draw neat sketches to depict the same. (10 Marks)

Module-2

- 3 a. Summarize the 3 basic interconnectivity options used for fibre channel connectivity with a neat diagram. (10 Marks)
b. Illustrate the different types of zoning with a neat diagram. Show the mesh topology for fabric design with a neat diagram. (10 Marks)

OR

- 4 a. Define iSCSI. Show the components used for iSCSI implementation with a neat diagram and brief the Host connectivity options. (10 Marks)
b. What is FCIP? Write a neat diagram for the FCIP protocol stack and explain how it works. (10 Marks)

Module-3

- 5 a. Explain backup and restore operations with a neat diagram. (10 Marks)
b. Write short note on the following backup Topologies with a neat diagram.
i) Direct attached Backup
ii) LAN based Backup (10 Marks)

OR

- 6 a. Describe the BC Technology solutions. (08 Marks)
b. Illustrate the SAN based backup Topology with a neat diagram. (08 Marks)
c. Bringout the working of a Traditional VM backup. (04 Marks)

Module-4

- 7 a. List the cloud service models and discuss any two. (10 Marks)
b. Discuss the following cloud enabling technologies in detail.
i) Grid computing ii) SOA (Service Oriented architecture) iii) Utility computing. (10 Marks)

OR

- 8 a. List the major cloud adoption considerations and explain the same. (10 Marks)
b. Explain cloud computing infrastructure in detail. (10 Marks)

Module-5

- 9 a. What are the vulnerabilities and security threats that are common in a SAN environment? Elaborate the same. (10 Marks)
b. Discuss the concept of securing the management Access Domain. (06 Marks)
c. Discuss the
i) LUN masking and zoning
ii) Basic SAN security mechanism used to protect unauthorized access strategies to storage. (04 Marks)

OR

- 10 a. Demonstrate the NAS file sharing with respect to the following :
i) Windows ACL's
ii) Unix permissions. (10 Marks)
b. Explain the following with respect to securing storage infrastructure in virtualized and cloud environments
i) Security concerns
ii) Security measures (10 Marks)

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