CBCS SCHEME

18CS8 USN

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

Time: 3 hrs. Max. Marks: 100

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

Module-1

- Define data center. List and explain the key elements of data center. Explain the characteristics of data center elements with diagram. (10 Marks)
 - Explain with neat diagram the evolution of storage architecture. (06 Marks)
 - c. With diagram explain about compute virtualization. (04 Marks)

OR

Explain disk drive components with diagram. (10 Marks) Discuss disk service time and disk I/O controller utilization. (10 Marks)

Module-2

- a. List the different RAID levels where parity technique has been adopted. Explain any three. (10 Marks)
 - Different between software and hardware RAID. (04 Marks)
 - With diagram explain different RAID techniques. (06 Marks)

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- Explain types of Intelligent storage systems. (10 Marks)
 - Explain with neat diagram the components of fibre channel storage area networks. (10 Marks)

Module-3

- Discuss different iSCSI topologies with neat diagram. (06 Marks)
 - Briefly explain about iSCSI protocol stack. (04 Marks)
 - Explain the components of NAS with neat sketch. Briefly explain the benefits of NAS (10 Marks)

OR

- Explain NAS implementations in detail. (06 Marks)
- Discuss about NAS file sharing protocols. (04 Marks)
 - With diagram explain about FCIP protocol stack and FCIP topology. (10 Marks)

Module-4

- Describe failure analysis in business continuity. Mention important BC technology (10 Marks)
 - With a neat diagram, explain the steps involved in backup and restore operation. (10 Marks)

- What is business continuity? Explain the BC terminology in detail. (10 Marks) (10 Marks)
 - Discuss different backup topologies.

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Module-5

- 9 a. Explain FC SAN security architecture and IPSAN security implementations with diagram.
 (10 Marks)
 - b. Explain the following:
 - i) Uses of local replica
 - ii) LVM based replication
 - iii) Full volume mirroring

(10 Marks)

OR

- 19 a. Explain storage security domains.
 - b. What is remote replication? Explain storage array based remote replication.

(10 Marks)

(10 Marks)

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