



USN

--	--	--	--	--	--	--	--	--	--

Eighth Semester B.E. Degree Examination, June/July 2024 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 the various factors that have contributed to the growth of digital data. (06 Marks)
b. Illustrate with a figure, the evolution of storage architecture. (08 Marks)
c. Explain the key characteristics of a data center. (06 Marks)

OR

- 2 a. Explain with a figure, the process of mapping user files to the disk storage subsystem with an LVM. (08 Marks)
b. Discuss the most popular interface protocols used for host to storage communication. (08 Marks)
c. Explain with a figure, the platter. (04 Marks)

Module-2

- 3 a. Discuss the limitations of software RAID. (04 Marks)
b. Discuss the various RAID techniques. (10 Marks)
c. Explain with a figure, the RAIDO configuration. (06 Marks)

OR

- 4 a. Discuss the various components of an intelligent storage system. (08 Marks)
b. Discuss the various components of Fibre Channel (FC) SAN. (08 Marks)
c. Explain with a figure, the active-passive configuration. (04 Marks)

Module-3

- 5 a. Explain with a figure, the FCIP protocol stack. (06 Marks)
b. Discuss the various benefits offered by the Network Attached Storage (NAS). (08 Marks)
c. Explain the process of handling I/Os in a network attached storage environment. (06 Marks)

OR

- 6 a. Explain with a figure, the iSCSI command sequencing. (06 Marks)
b. Explain the various factors affecting Network Attached Storage (NAS) performance. (06 Marks)
c. Explain with a figure, the various components of Network Attached Storage (NAS). (08 Marks)

Module-4

- 7 a. What is information availability? Discuss the causes of information availability. (06 Marks)
b. Explain the various stages involved in the Business Continuity (BC) planning life cycle. (08 Marks)
c. List the various tasks involved in business impact analysis. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Explain with a figure, the backup and restore operation. (10 Marks)
b. Explain with a figure, the two different types of backup topologies. (10 Marks)

Module-5

- 9 a. Explain the various terms which are used to represent entities and operations in a replication environment. (06 Marks)
b. Explain with a figure, the storage array based local replication. (06 Marks)
c. Illustrate with a figure, the synchronous and asynchronous replication. (08 Marks)

OR

- 10 a. Illustrate with a figure, the synchronous and asynchronous array based remote replication. (08 Marks)
b. Discuss the four security goals which are achieved through information security framework. (06 Marks)
c. Explain with a figure, the storage security domains. (06 Marks)
