



# CBGS SCHEME

15CS754

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

Time: 3 hrs.

Max. Marks : 80

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

### Module-1

- 1 a. What is a data center? Explain key characteristics of data center elements with diagram. (08 Marks)
- b. What is a file system? Explain the process of mapping user files to the disk storage. (08 Marks)

OR

- 2 a. Describe with a neat diagram the components of intelligent storage system. (08 Marks)
- b. With diagram explain different RAID techniques. (08 Marks)

### Module-2

- 3 a. Explain with neat diagram the components of Fiber Channels (FC) storage Area Networks. (08 Marks)
- b. What is zoning? Explain its types. (08 Marks)

OR

- 4 a. Discuss different iSCSI Topologies with neat diagrams. (08 Marks)
- b. Write short notes on Fiber Channel Over Ethernet (FCOE). (08 Marks)

### Module-3

- 5 a. Define the following terminologies:  
i) MTBF ii) RPO iii) MTTR iv) RTO. (08 Marks)
- b. Describe the failure analysis in BC. Mention some important BC technology solutions. (08 Marks)

OR

- 6 a. Explain backup and restore operations with neat diagram. (08 Marks)
- b. Explain Backup in virtualized environments. (08 Marks)

### Module-4

- 7 a. Define cloud computing. List and explain the essential characteristics of cloud computing. (06 Marks)
- b. Classify the deployment models in cloud computing. Explain any two. (10 Marks)

OR

- 8 a. List and explain the challenges facing in cloud-computing. (06 Marks)
- b. Explain cloud infrastructure layers, with diagram. (10 Marks)

### Module-5

- 9 a. Explain FC SAN security architecture with neat diagram. (08 Marks)
- b. Explain the concept of Kerberos with neat diagram. (08 Marks)

OR

- 10 a. Explain the storage management activities in detail. (08 Marks)
- b. Explain Information Lifecycle Management (ILM) in detail with challenges. (08 Marks)

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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.