CBCS SCHEME

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15CS754

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022
Storage Area Networks

Time: 3 hrs. Max. Marks: 80

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

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.

Module-1

1 a. Explain key characteristics of a data center with a neat diagram. **(08 Marks)**

b. What is a file system? Explain the process of mapping user files to disk storage with a neat diagram. **(08 Marks)**

OR

2 a. Explain RAID techniques with a neat diagram. **(08 Marks)**

b. With a neat diagram, explain the components of an Intelligent Storage System (ISS). **(08 Marks)**

Module-2

3 a. Explain FC connectivity with a neat diagram. **(08 Marks)**

b. What is iSCSI? With a neat diagram explain iSCSI protocol stack. **(08 Marks)**

OR

4 a. Define NAS. With a neat diagram, explain the components of NAS. **(08 Marks)**

b. With a neat diagram, explain the concept of object storage and retrieval in OSD systems. **(08 Marks)**

Module-3

5 a. What is a backup? With a neat diagram, explain the different backup topologies. **(08 Marks)**

b. What is a Data deduplication? With a neat diagram, explain source-based data deduplication and Target-Based data deduplication. **(08 Marks)**

OR

6 a. Describe the various Host-Based local replication technologies. **(08 Marks)**

b. What is a remote replication? Explain synchronous and asynchronous replication mode in it. **(08 Marks)**

Module-4

7 a. Explain the benefits of cloud computing. **(08 Marks)**

b. Explain the different classification of cloud deployment models. **(08 Marks)**

OR

8 a. Explain the following:
   i) In-Band Virtualization Appliances
   ii) Out-of-Band Virtualization Appliances. **(08 Marks)**

b. Explain the Application-Aware storage virtualization with a neat diagram. **(08 Marks)**

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Module-5

9 a. Explain the SAN security architecture with a neat diagram. **(08 Marks)**

b. Define Kerberos. Explain Kerberos authorization with a neat diagram. **(08 Marks)**

OR

10 a. Explain storage infrastructure management activities. **(08 Marks)**

b. What is Storage tiering? Explain Intra Array storage and Inter-Array storage tiering. **(08 Marks)**

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