CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐   **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.

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)**

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)**

* * * * *