10CS/IS765

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024
Storage Area Networks

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting at least TWO questions from each part.*

PART – A

1   a. Which core elements are essential for the basic functionality of a data center? Briefly explain with an order processing system.   **(12 Marks)**
    b. What is disk service time? Explain different service times on a disk driver.   **(08 Marks)**

2   a. Explain the following with appropriate diagrams :
            i) Raid 0   ii) Raid 1   iii) Nested Raid   iv) Hot spares.   **(10 Marks)**
    b. With a neat diagram, explain the components of Intelligent Storage System (ISS).   **(05 Marks)**
    c. With a neat diagram, explain the features of high end storage systems.   **(05 Marks)**

3   a. With neat diagram explain SCSI communication model.   **(10 Marks)**
    b. What are different types of ports available in Fiber channel? Also mention its uses. **(10 Marks)**

4   a. What are benefits on NAS? Explain the components of NAS with a neat diagram.   **(08 Marks)**
    b. What is iSCSI? Explain iSCSI protocol stack with a neat block diagram.   **(08 Marks)**
    c. Write short notes on NFS.   **(04 Marks)**

PART - B

5   a. Define Archives. Explain different types of Archives with an example.   **(10 Marks)**
    b. Explain the concept of storage virtualization with figure.   **(10 Marks)**

6   a. Describe the failure analysis in BC. Briefly explain BC technology solution.   **(10 Marks)**
    b. With a neat diagram, explain the steps involved in backup and restore operation.   **(10 Marks)**

7   a. Explain different purposes of Local replica for source data.   **(10 Marks)**
    b. Explain Host – based log shipping.   **(10 Marks)**

8   Write a short note on :
    a. Assets
    b. Threats
    c. Vulnerability
    d. Data encryption   **(20 Marks)**

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