10CS/IS765

Seventh Semester B.E. Degree Examination, Dec.2017/Jan.2018

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. What is data? Mention the factors that have contributed to the growth of digital data.
                                                                                (04 Marks)
   b. Explain the core elements and key requirements of data center.   **(08 Marks)**
   c. Discuss "Disk Drive Performance" and Little's and utilization law in detail. **(08 Marks)**

2 a. Explain the terms: striping, mirroring and parity. List and explain different RAID levels where parity technique has been adopted. **(15 Marks)**
   b. Define "command queuing". Briefly explain commonly used command queuing algorithm.
                                                                                (05 Marks)

3 a. Explain SCSI-3 architecture and SCSI-3 client server model.   **(10 Marks)**
   b. Name the basic interconnectivity options that is supported by FC architecture. Explain the FC-AL and FC-SW transmission in detail. **(10 Marks)**

4 a. Define NAS. List the benefits of NAS. Explain different NAS implementations in detail.
                                                                                (10 Marks)
   b. Mention the topologies of iSCSI connectivity. Briefly explain them. Also write the diagram of iSCSI protocol stack. **(10 Marks)**

PART – B

5 a. Define CAS. List the benefits of CAS. Explain CAS Architecture in detail. **(10 Marks)**
   b. What is virtualization? Explain the types of storage virtualization in detail. **(10 Marks)**

6 a. Discuss 'BC Planning Lifecycle".   **(10 Marks)**
   b. Discuss Backup and Restore operations in detail.   **(10 Marks)**

7 a. What is the primary purpose of "data replication"? Mention the two major technologies adopted for local replication. Explain any one in detail. **(10 Marks)**
   b. Define "Remote Replication". Explain the different storage array based remote replications techniques. **(10 Marks)**

8 a. Mention the different SAN security mechanisms. Explain them in brief.   **(12 Marks)**
   b. Discuss storage management activities.   **(08 Marks)**

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