Seventh Semester B.E. Degree Examination, June / July 2014
Storage Area Networks

Time: 3 hrs.   Max. Marks:100

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

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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.

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PART – A

1   a. What is information lifecycle management? Explain in detail regarding ILM implementation. **(10 Marks)**
    b. List down the logical components of the hosts? Explain in detail regarding, i) Volume manager ii) File system. **(10 Marks)**

2   a. Explain the below concepts briefly with appropriate diagram. i) RAID O   ii) RAID 1 iii) Parity   iv) Hot spares. **(10 Marks)**
    b. What is intelligent storage system? With a neat diagram. Explain the components of an intelligent storage system. **(10 Marks)**

3   a. Briefly explain the various disk drive interfaces used in DAS. **(04 Marks)**
    b. Explain SCSI – 3 architecture with a neat diagram. **(06 Marks)**
    c. What is SAN? List and briefly explain the various fibre channel ports. **(06 Marks)**
    d. Explain the concept of zoning along with the type of zoning. **(04 Marks)**

4   a. What is NAS? What are the benefits of NAS? List down the factors affecting NAS performance and availability. **(10 Marks)**
    b. What is iSCSI? Explain iSCSI protocol stack with a neat block diagram. **(10 Marks)**

PART – B

5   a. Explain the concept of CAS with its architecture. **(08 Marks)**
    b. Write short notes on: i) Network virtualization.
                              ii) Server virtualization. **(06 Marks)**
    c. With a neat diagram, explain the storage virtualization concept. **(06 Marks)**

6   a. Explain the Business Continuity (BC) life cycle in detail. **(10 Marks)**
    b. Explain any two basic backup topologies that are used in a backup environment with a neat diagram. **(10 Marks)**

7   a. Explain the concept of,
       i) LVM-based replication.
       ii) Full volume mirroring.
       iii) Uses of local replicas. **(10 Marks)**
    b. What is remote replication? Explain the concept of synchronous replication and asynchronous replication. **(10 Marks)**

8   a. Briefly explain the SAN security architecture, illustrating the various levels (zones) of storage environment that must be secured. **(10 Marks)**
    b. List out and explain briefly the parameters to be monitored in the storage infrastructure components? Explain accessability monitoring with a neat diagram. **(10 Marks)**

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