Code: 9A05805

1

B.Tech IV Year II Semester (R09) Regular Examinations, March/April 2013

STORAGE AREA NETWORKS

(Computer Science and Engineering)

Time: 3 hours   Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
*****

1 (a) Discuss in brief about data, types of data, information. Explain in brief about the key challenges in information management.
   (b) Explain about the evolution of storage technology.

2   Explain in detail about the key components of a disk drive and their role/working.

3   Explain in detail about RAID 1 and RAID 5 configuration.

4 (a) Explain about NAS file I/O.
   (b) Write in detail about the NAS components and implementation.

5 (a) What is information availability and unavailability? Write a brief notes on them. Provide examples of planned and unplanned downtime in the context of data center operations.
   (b) How do you measure the information availability? Explain with example.

6   Explain in detail about back up topologies.

7   Explain how security is implemented in NAS.

8   Write short notes on:
   (a) EMC ControlCenter
   (b) EMC TimeFinder.

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2

B.Tech IV Year II Semester (R09) Regular Examinations, March/April 2013

STORAGE AREA NETWORKS

(Computer Science and Engineering)

Time: 3 hours   Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
*****

1   Explain in detail about data center infrastructure.

2   Explain about various factors that affect the performance of disk drives and fundamental laws governing disk performance with examples.

3   Explain the process of data recovery in case of a drive failure in RAID 5. What are the benefits of using RAID 3 in a backup application?

4   Explain in detail about the various components of FC-SAN.

5   (a)   What is information availability and unavailability? Explain about the consequences of downtime.
     (b)   How do you measure the information availability? Explain with example.

6   What is local replication? Explain in detail about the local replication technologies.

7   Explain how security is implemented in IP-SAN.

8   (a)   Explain about different forms of storage virtualization.
     (b)   Write short notes on EMC TimeFinder and EMC SnapView.

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3

B.Tech IV Year II Semester (R09) Regular Examinations, March/April 2013

STORAGE AREA NETWORKS
(Computer Science and Engineering)

Time: 3 hours   Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
*****

1   An engineering design department of a large company maintains over 600,000 engineering drawings that its designers access and reuse in their current projects, modifying or updating them as required. The design team wants instant access to the drawings for its current projects, but is currently constrained by an infrastructure that is not able to scale to meet the response time requirements. The team has classified the drawings as "most frequency accessed," "frequently accessed," "occasionally accessed," and "archive."

   (a)   Suggest a strategy for design department that optimizes the storage infrastructure by using ILM.

   (b)   Explain how you will use "tiered storage" based on access frequency.

   (c)   Detail the hardware and software components you will need to implement your strategy.

2   Explain in detail about the logical components of a host in a storage system environment.

3   (a)   Discuss in brief about software RAID, hardware RAID and RAID array components.

   (b)   Discuss about the concepts of striping, mirroring, and parity in case of RAID arrays.

4   Explain in detail about the three basic interconnectivity options supported by FC architecture.

5   Explain about a BC planning lifecycle.

6   (a)   Explain about host-based remote replication.

   (b)   Explain about SAN-based remote replication.

7   Explain about the parameters and components to be monitored for a storage infrastructure.

8   Explain about different types of storage vitualizations. Write notes on EMC Invista.

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4

B.Tech IV Year II Semester (R09) Regular Examinations, March/April 2013

STORAGE AREA NETWORKS
(Computer Science and Engineering)

Time: 3 hours   Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
*****

1   What is information life cycle? Explain it's management and implementation.

2   Discuss in brief about the key components of a storage system environment.

3   Explain in detail about RAID 0 and RAID 6 configurations.

4   (a)   Explain about the Zoning function of an FC switch.
     (b)   Explain in detail about Fibre channel addressing.

5   Why is failure analysis is important? Explain about failure analysis and fault tolerance in detail.

6   What is the purpose of a back up? Explain about the backup considerations and granularity with an example.

7   Explain about the parameters and components to ne monitored for a storage infrastructure.

8   Write short notes on:
     (a)   EMC ControlCenter.
     (b)   EMC SnapView.

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