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12SCN323

Third Semester M.Tech. Degree Examination, Dec. 2013 / Jan 2014.
Advances in Storage Area Networks

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Explain the Server – Centric IT architecture, with a neat diagram. Explain its limitations. (10 Marks)
b. Explain the storage – Centric IT architecture, with a neat diagram. Explain its advantages. (10 Marks)
- 2 a. Explain the following RAID levels with necessary block diagrams :
i) RAID 0 ii) RAID 10. (10 Marks)
b. Describe the necessary techniques which helps to protect the data against any catastrophic situations in a networks, with neat diagram. (10 Marks)
- 3 a. Explain the importance of each layer in the fibre channel protocol stack, with neat diagram. (10 Marks)
b. Explain with a neat diagram, the physical I/O path from CPU to the storage system. (10 Marks)
- 4 a. Explain network attached storage (NAS). with a neat diagram. (10 Marks)
b. Clearly bring out the difference between the fibre channel and NAS. (10 Marks)
- 5 a. With a neat diagram, explain storage virtualization. (08 Marks)
b. Explain symmetric and asymmetric storage virtualization in the network. (12 Marks)
- 6 a. Explain fibre channel switch and Host Bus Adapter (HBA). (10 Marks)
b. With a neat diagram, explain the configuration of simple bridge / router over fibre channel in a SAN environment. (10 Marks)
- 7 a. With a neat diagram, illustrate the basic components of the switch operating system. (10 Marks)
b. Give a view of SAN as an entire solution for implementing a SAN configuration into a data center. Also indicate the main challenges faced during its implementation. (10 Marks)
- 8 a. Discuss with a neat diagram of physical configuration management for SAN. (10 Marks)
b. What are the aspects to be considered for availability metrics for managing availability for storage networks? (10 Marks)

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.