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18SCS241

Second Semester M.Tech. Degree Examination, June/July 2019 Advances in Storage Area Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat diagram, explain the two types of IT architecture with limitations and advantages. (10 Marks)
b. With a neat diagram, explain instant copies and space efficient instant copy. (10 Marks)

OR

- 2 a. With a neat diagram, explain the architecture of intelligent disk subsystems. (08 Marks)
b. Explain the operation of RAID4 and RAID5 level. How RAID5 overcome the limitations of RAID4. (12 Marks)

Module-2

- 3 a. Explain the three fibre channel topologies with necessary diagram. (10 Marks)
b. Explain class1, class2 and class3 service classes in fibre channel communication with relevant diagram. (10 Marks)

OR

- 4 a. Discuss the NAS architecture with its advantages. (08 Marks)
b. Explain Journaling and volume manager with a neat diagram. Explain the realization RAID in volume manager. (12 Marks)

Module-3

- 5 a. Explain storage virtualization at block level and file level, with neat diagrams. (10 Marks)
b. Give the advantages of symmetric and asymmetric virtualization. (10 Marks)

OR

- 6 a. Explain symmetric storage virtualization with a neat diagram. (08 Marks)
b. Explain asymmetric storage virtualization with a neat diagram. (08 Marks)
c. What are the objectives of storage virtualization? (04 Marks)

Module-4

- 7 a. Briefly explain the SAN hardware devices. (10 Marks)
b. Explain fibre channel switches and different types of ports. (10 Marks)

OR

- 8 a. Briefly explain the software components of SAN. (10 Marks)
b. Write a short notes : i) device drivers ii) host bus adaptors. (10 Marks)

Module-5

- 9 a. Explain SNMP architecture with necessary diagram. Briefly explain the four operations defined by SNMP for monitoring and configuration of managed devices. (10 Marks)
b. Explain WBEM architecture with a neat diagram. (10 Marks)

OR

- 10 a. Explain briefly the in band management in fibre channel SAN. (10 Marks)
b. Briefly explain the two protocol standard for out band management, CMIP and DMI. (10 Marks)

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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.