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SEE

CSE15



RAMAIAH
Institute of Technology

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(Autonomous Institute, Affiliated to VTU)
(Approved by AICTE, New Delhi & Govt. of Karnataka)
Accredited by NBA & NAAC with 'A' Grade

SEMESTER END EXAMINATIONS – JANUARY 2019

Course & Branch	: B.E : Computer Science and Engineering	Semester	: VII
Subject	: Storage Area Networks	Max. Marks	: 100
Subject Code	: CSE15	Duration	: 3 Hrs

Instructions to the Candidates:

- Answer one full question from each unit.
- Write wherever diagram and syntax required.

UNIT- I

- List the characteristics expected of a data center and also list the ways of managing a data center. CO1 (08)
 - Explain the interface protocols of host to storage for communications. CO1 (08)
 - Explain the concept of Host Access to Data. CO1 (04)
- Describe the key characteristics of a data center. CO1 (08)
 - Justify, zone bit recording in modern disks, write leveling in flash drives, also the need for queue optimization while writing to disk, cache valuating. CO1 (08)
 - Discuss the two types of Direct –Attached Storage. CO1 (04)

UNIT- II

- Describe with a neat diagram Raid level 1 and Raid 5 for achieving redundancy and increasing disk performance. CO2 (06)
 - Compare different Raid levels in terms of disk requirements, write penalty, application and redundancy. CO2 (08)
 - Discuss zone bit recording in disk and write leveling and multilevel storage in flash drives. CO2 (06)
- Discuss intelligent storage array with a neat diagram and function of its various components. CO2 (08)
 - State difference between thick provisioning and thin provisioning with an example. CO2 (06)
 - Describe cache flushing techniques and cache vaulting. CO2 (06)

UNIT- III

- State difference between single mode fiber and multimode fiber and the advantages of using optic fiber over copper cables for SAN networks. CO3 (08)
 - Compare the different fabric services available and their individual functionality? Examine the different service classes. CO3 (06)
 - List various componets of FC SAN with their roles in the network. CO3 (06)
- Elaborate the need for using ip SAN? Explain the different variants of ip storage protocols and topologies and their different application. CO3 (08)
 - Discuss Fiber channel protocol Stack and elaborate their functions. CO3 (06)
 - Define Zoning and discuss its variants and advantages. CO3 (06)

UNIT- IV

- Examine the difference between the NAS storage and Content managed storage? What are the components of object based storage. CO4 (10)
 - What is data deduplication? Elaborate on the various methods of data deduplication and their advantages. CO4 (10)
- List the recovery considerations? Examine the backup methods. CO4 (08)
 - Compare Fabric SAN network and NAS and enumerate circumstances which are conducive for implementation of NAS and SAN. CO4 (06)

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- Discuss the applications of content managed storage. CO4 (06)

UNIT- V

- Discuss the various stages of business continuity planning life cycle. CO5 (08)
 - List and explain the key storage infrastructure management activities. CO5 (08)
 - Define the following: CO5 (04)
 - Threats
 - Vulnerability.
- Describe the Information life cycle and why we need Storage tiering. CO5 (10)
 - Explain in detail Monitoring the storage infrastructure with examples. CO5 (10)
