MCSEE42/MCNEE42

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M S RAMAIAH INSTITUTE OF TECHNOLOGY
(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)
BANGALORE – 560 054
SEMESTER END EXAMINATIONS – JANUARY 2016

Course & Branch : **M.Tech- Computer Science & Engg. Computer Network Engg.**	**Semester** : **III**	
Subject : **Advances in Storage Area Networks**	**Max. Marks** : **100**	
Subject Code : **MCSEE42 / MCNEE42**	**Duration** : **3 Hrs**	

Instructions to the Candidates:
- Answer one full question from each unit.

UNIT – I

1. a) Explain the business applications and its characteristics in detail. (06)

    b) Explain RAID 0 and RAID 1. (10)

    c) Explain the concept of storage networks. (04)

2. a) With a neat diagram, explain the concept of virtual disks. (08)

    b) Describe the problem of size and access in storage experienced by IT organizations and the solution proposed. (08)

    c) Explain space-efficient instant copy. (04)

UNIT – II

3. a) Describe IP storage, its advantages and disadvantages. (10)

    b) Explain Fabric topology in constructing Fibre channel SAN. (10)

4. a) Write short notes on: 1. Public loop 2. iSCSI Applications. (10)

    b) Explain five layers of Fibre channel protocol stack. (10)
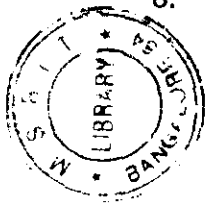
UNIT – III

5. a) Name the two common NAS file sharing protocols and explain them in detail. (10)

    b) Explain Enterprise NAS with a neat diagram. (06)

    c) Explain local file system. (04)

6. a) Explain General Parallel File System (GPFS) with a case study. (10)

    b) Explain the performance bottlenecks in file servers and how to accelerate the network file systems for better performance. (10)

UNIT – IV

7. a) Explain the storage virtualization in storage devices. Discuss the advantages and disadvantages in storage virtualization in storage devices. (10)

    b) Explain the realisation of the virtualisation entity. (06)

    c) Explain the availability due to the introduction of redundancy in the virtualization entity. (04)

8. a) Explain storage virtualization with a neat diagram. (06)
   b) Explain the replacement of storage devices under storage virtualization. (06)
   c) Explain the advantages and disadvantages of storage virtualization in the Network. (08)

UNIT – V

9. a) Explain the four major components of SAN architecture. (08)
   b) Discuss five systems management disciplines with a neat diagram. (08)
   c) Explain In-Band and Out-of-Band Management function under SAN management applications. (04)

10. a) Explain how to develop a plan for storage. (05)
    b) Explain the ISL functions with a simple cascading switch configuration. (10)
    c) Explain the fabric operation from a hardware perspective. (05)

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