

SF-233

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Seat No.	
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T.E. (CSE) (Part - III) (Semester - VI) (New)

Examination, November - 2017

STORAGE NETWORKS

Sub. Code : 66861

Day and Date : Monday, 06-11-2017

Total Marks : 100

Time : 2.30 p.m. to 5.30 p.m.

- Instructions :**
- 1) Attempt any three questions from each section.
 - 2) Figure to the right indicate full marks.
 - 3) Assume suitable data wherever necessary.

SECTION-I

- Q1) a)** Explain the following in relation with Information Lifecycle. **[8]**
- i) Information Lifecycle Management (ILM).
 - ii) Information Lifecycle Management (ILM) Implementation.
 - iii) ILM Benefits.
- b) The average I/O size of an application is 128 KB. The following specifications are available from the disk manufacturer: average seek time = 2.5 ms, 7,200 RPM, transfer rate = 60 MB/s. Determine the maximum IOPS that could be performed with this disk for this application. Taking this case as an example, explain the relationship between disk utilization and IOPS. **[8]**

- Q2) a)** Describe SCSI Command Model in direct attached storage. **[8]**

OR

- a) Describe Fibre Channel Architecture. **[8]**
- b) Explain Benefits of Network Attached Storage[NAS]. **[8]**

P.T.O.

- Q3) a)** Describe FCIP, FCIP Topology and FCIP Performance and Security. [8]
- b) An application has 1,000 heavy users at a peak of 2 IOPS each and 2,000 typical users at a peak of 1 IOPS each, with a read/write ratio of 2: 1. It is estimated that the application also experiences an overhead of 20 percent for other workloads. Calculate the IOPS requirement for RAID 1, RAID 3, RAID 5, and RAID 6. [8]

Q4) Solve ANY TWO of the following questions.

- a) Describe different RAID levels with its advantages and disadvantages. [9]
- b) Explain Cache component of an Intelligent Storage System with following reference. [9]
- i) Structure of Cache
 - ii) Read Operation with Cache
 - iii) Write Operation with Cache
 - iv) Cache Implementation
 - v) Cache Management
 - vi) Cache Data Protection.
- c) Describe Data Center Infrastructure. [9]

SECTION-II

- Q5) a)** Explain Backup and Restore Operations. [8]
- b) Describe BC Planning Lifecycle. [8]
- Q6) a)** Explain symmetric storage virtualization with its advantages and disadvantages. [8]
- b) Describe BC Planning Lifecycle in business continuity. [8]

- Q7)** a) Explain Storage Virtualization on various levels of storage network. [8]
b) Describe various Backup purpose and backup considerations in storage networks. [8]

Q8) Solve ANY TWO of the following questions.

- a) Explain Failure Analysis in BC, BC terminology and Business Impact Analysis. [9]
b) Explain implementation considerations in Storage virtualization. [9]
c) Describe different Backup Granularity and Recovery Considerations.[9]

