## **USN**

## Seventh Semester B.E. Degree Examination, Dec. 2013/Jan. 2014 **Storage Area Network**

Time: 3 hrs. Max. Marks:100

> Note: Answer FIVE full questions, selecting atleast TWO questions from each part.

	PART – A		
1	a. b. c.	Explain the architecture and evolution of storage technology, with diagram.  Describe HLM implementation in detail, with its benefits.  Explain disk drive components, with suitable diagram.	(05 Marks) (05 Marks) (10 Marks)
2	<ul><li>a.</li><li>b.</li><li>c.</li></ul>	Describe RAID levels with reference to nested RAID, RAID3 and RAID5, diagram. Explain the components of ISS with reference to LUN and LUN masking, with diagrams intelligent storage array, in detail.	(10 Marks)
3	a. b. c.	Explain disk drive interface, with diagram.  Describe SCSI – 3 architecture, in detail.  Explain FC connectivity with related diagrams.	(05 Marks) (05 Marks) (10 Marks)
4	a. b. c.	Describe NAS implementations and benefits, with a neat diagram.  Explain ISCSI connecting topologies with a suitable diagram.  Describe FCIP in detail.	(10 Marks) (05 Marks) (05 Marks)
PART – B			
5	a. b.	Explain object storage and retrieval in CAS, with suitable diagrams.  Describe storage virtualization types in detail and discuss its challenges.	(10 Marks) (10 Marks)
6	a. b.	Describe the failure analysis in BC. Mention some important BC technology solut Explain back up topologies, in detail.	tion. (10 Marks) (10 Marks)
7	a. b. c.	Explain local replication technologies, in detail. Explain the various remote replication modes. Write a note on DWDM.	(10 Marks) (05 Marks) (05 Marks)
8	a. b. c.	Explain the security attributes of storage security frame works.  Describe SAN security architecture with diagram.  Describe storage management activities in detail, with example.	(04 Marks) (06 Marks) (10 Marks)