Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
ITC801	Storage network management & Retrieval	4	-	-	4	-	-	04
		Examination Scheme						
		ISE	MSE		ESE			
		10	30		100 (60%Weightage)			

Pre-requisite Course Codes		
After successful completion of the course, student will be able to:		
Course Outcomes	CO1	Identify key challenges in managing information and analyze different storage networking technologies
	CO2	Illustrate the different component of storage network architecture.
	CO3	Describe the components and the implementation of NAS and storage virtualization
	CO4	Recognize the need of Backup to recover Information
	CO5	Use the concepts information retrieval in storage network.

Module No.	Topics	Ref.	Hrs.
1	**NEEDFORSTORAGENETWORK** INTRODUCTION:-Limitations of traditional server centric architecture, Storage centric architecture and its advantages. BASICS OFSTORAGENETWORK:-Intelligent Storage Systems (ISS),Data protection (RAID implementation methods).RAID arrays ,Components, RAID technologies, RAID levels, RAID impact on disk, performance &RAID comparison.	1,2	10
2	**STORAGE NETWORK ARCHITECTURE** SCSI,SAN:FC SAN FC Protocol Stack, IP Storage, Infini band, Virtual Interfaces.	1,2	08
3	**ADVANCED STORAGE TECHNOLOGY** NETWORK ATTACHED STORAGE (NAS):-Local File systems, Network File systems and file servers, Shared Disk File systems: Case study, Comparison:NAS,FC SAN and I SC SISAN. STORAGEVIRTUALIZATION:- Virtualization in I/O path, Limitations and requirements, Definition of Storage Virtualization, Storage virtualization on Block and file level, Storage virtualization on	1,2	14

	various levels of Storage network, Symmetric and Asymmetric Virtualization.		
4	**STORGAE NETWORK BACKUP AND RECOVERY** BC Terminology, BC Planning Life cycle, General Conditions for Backup, Recovery Considerations, Network Backup Services Performance Bottlenecks of Network Backup, Backup Clients, Back up file systems, Backup Databases, Next Generation Backup.	2	06
5	**INFORMATION RETRIEVAL IN STORAGE NETWORK** Overview, Abstraction ,Information System, Measures from Data to Wisdom, Document and Query Form, Query structures, The matching process, Text analysis:Indexing,Matrixrepresentation,Termextraction,Termassociation, , Stemming, Multilingual retrieval	2	10
	Total hours of instructions		48

References:

1. ULFTroppen,RainerErkensandWolfgangMuller,"*StorageNetworksExplained:Basi c and Applications of Fibre Channel SAN,NAS and ISCSI and Infifni band* ",Wiley
2. EMC Educational Services, "*Information Storage and Management"*, Wiley India
3. R. R. Korfhage ,"*Information Storage and Retrieval",* Wiley
4. Richard Barker and Paul Massiglia, " *Storage Area Network Essentials: A Complete Guide to Understanding and Implementing SANs"*, Wiley.
5. Robert Spalding, " *Storage Networks: The Complete Reference*", Tata McGraw Hill
6. W. Curtis Preston, "*Using SANs and NAS*", O'Reilly