

Sub:	Storage Area Networks				Sub Code:	17CS754	Branch:	ISE
Date:	18 -12 -20	Duration:	90 min's	Max Marks:	50	Sem / Sec:	VII B	OBE

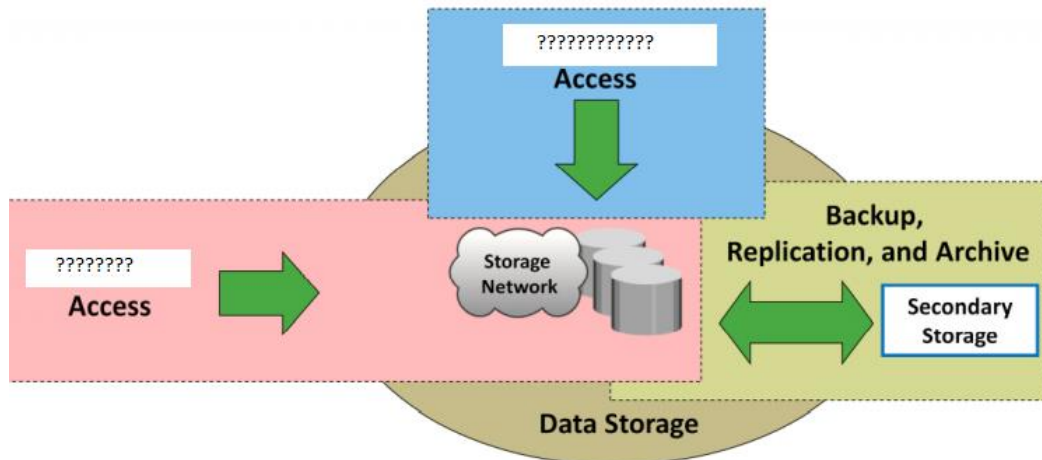
Answer any THREE FULL Questions from Part A

		MAR KS	CO	RBT
1.	Give A Brief Introduction Of Windows Azure Operating System with the analytics of Cloud deployment and service. How cloud is deployed in different Business? What are the significant cloud services are utilized by business models? Discuss in detail the different cloud deployment models and service models.	[10]	CO4	L2
2.	In what way we can protect the information from security threats? How many threats can be countered in information security? Explain the FC SAN based security architecture with neat diagram.	[10]	CO5	L2
3.	Explain the features and Profits of cloud computing	[10]	CO5	L2
4. (a)	Explain ILM in detail with challenges. List its profits.	[05]	CO5	L2
(b)	Explain the concept of Kerberos with neat diagram and need of Implementation?	[05]	CO5	L2

Answer all Questions from Part B

PART B

1. **Storage Security Domains**



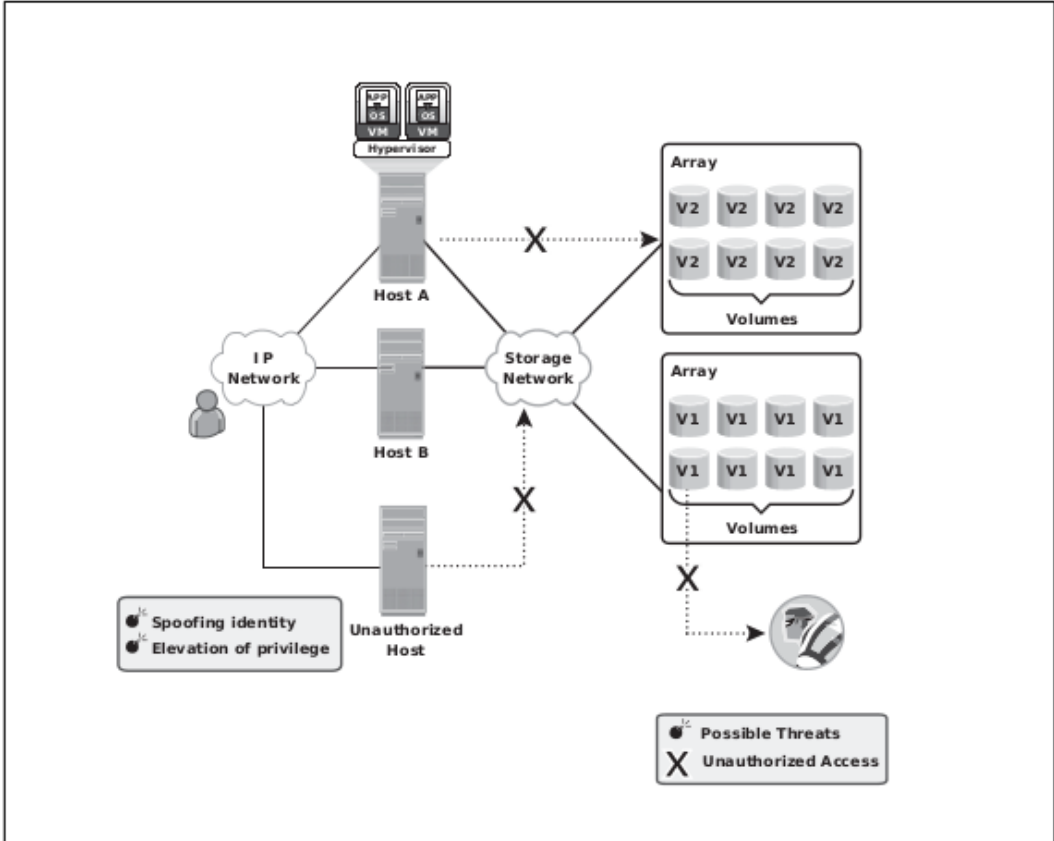
Identify the ??? access from the above diagram?

- a) Backup, Archive
- b) Archive, Migration
- c) Migration, Direct
- d) **Management, Application**

2.	This is a repository for the storage, management, and dissemination of data in which the mechanical, lighting, electrical and computer systems are designed for maximum energy efficiency and minimum environmental impact.	[1]	CO4	L2
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- a) Storage lab
- b) **Data Center**
- c) Data warehouse

	d) Fabric			
3.	<p>This is the process of assigning storage, usually in the form of server disk drive space, in order to optimize the performance of a storage area network.</p> <p>a) Storage Provisioning b) Data mining c) Storage assignment d) Data Warehousing</p>	[1]	CO4	L2
4.	<p>Simply stated, these are large boxes that hold lots of hard disks.</p> <p>a) Host b) Tape library c) Switch d) Disk Array</p>	[1]	CO4	L2
5.	<p>This consists of the precautions taken so that the effects of a disaster will be minimized.</p> <p>a) Data retrieval b) Disaster recovery c) Archive d) Replication</p>	[1]	CO5	L2
6.	<p>This is the practice of collecting computer files that have been packaged together for backup, to transport to some other location, for saving away from the computer so that more hard disks can be made available, or for some other purpose.</p> <p>a) Backup b) Archive c) Migration d) Compression</p>	[1]	CO4	L2
7.	<p>The Kerberos authentication process shown in figure on the slide includes the following steps:</p> <ol style="list-style-type: none"> 1. The user logs on to the workstation in the Active Directory domain (or forest) using an ID and a password. The client computer sends a request to the AS running on the KDC for a Kerberos ticket. The KDC verifies the user's login information from Active Directory. 2. The KDC responds with an encrypted Ticket Granting Ticket (TGT) and an encrypted session key. TGT has a limited validity period. TGT can be encrypted only by the KDC, and the client can decrypt only the session key. 3. When the client requests a service from a server, it sends a request, consisting of the previously generated TGT, decrypted with the session key and the resource information to the KDC. 4. The KDC checks the permissions in Active Directory and ensures that the user is not authorized to use that service. <p>Which are the statements being wrong in the above?</p> <p>a) i,ii, iii b) i, ii, iv c) ii, iii, iv d) i, ii, iii</p>	[1]	CO5	L2
8.	<p>Find true or false from the below statement? In a data modification attack, the unauthorized user attempts to modify information for malicious purposes. A modification attack can target the data at rest or the data in transit.</p> <p>A. True B. False</p>	[1]	CO5	L2

9.	<p>What are the major benefits of SAN?</p> <p>A. Centralized backup B. Storage consolidation C. LAN-less backup D. All of the mentioned</p>	[1]	CO4	L2
10	<p>Which of the following are true. Logical Volumes _____</p> <p>A. Can span across multiple volume groups B. Can span across multiple physical volumes C. Can be constructed only using a single physical disk D. None of the mentioned</p>	[1]	CO4	L2
11	 <p>In the above diagram, where we can find the media threat?</p> <p>A. Host A B. Client C. Array volume D. Host B</p>	[1]	CO5	L2
12	<p>From the below find the SAN Security Mechanisms</p> <p>A. LUN masking , Zoning, RBAC B. Zoning, Array volume C. switch-wide control D. RBAC, LAN-less backup E. logical partitioning of a fabric (Virtual SAN), Migration, Direct</p>	[1]	CO5	L2
13	<p>EMC Mozy is an example of</p> <p>A. Infrastructure-as-a-Service (IaaS) B. Platform-as-a-Service (PaaS) C. Software-as-a-Service (SaaS)</p>	[1]	CO4	L2
14	<p>Amazon Elastic Compute Cloud (Amazon EC2) is an example of IaaS that provides</p> <p>A. scalable compute capacity B. on-demand, in the cloud</p>	[1]	CO4	L2

	<p>C. leverage Amazon’s massive computing infrastructure with no up-front capital investment</p> <p>D. All of the above.</p>			
15	<p>According to _____, cloud computing is classified into four deployment models public, private, community, and hybrid which provide the basis for how cloud infrastructures are constructed and consumed.</p> <p>A. TCS</p> <p>B. NIST</p> <p>C. IEEE</p> <p>D. Amazon</p>	[1]	CO4	L2
16	<p>Cloud computing infrastructure usually consists of the following layers:</p> <p>A. Physical infrastructure, Cloud management and service creation tools, Application layer, Network layer</p> <p>B. Application layer , Virtual infrastructure, Cloud management and service creation tools, Network layer</p> <p>C. Applications and platform software, Physical infrastructure, Virtual infrastructure, Cloud management and service creation tools</p> <p>D. Network layer, Application layer ,Cloud management and service creation tools</p>	[1]	CO4	L2
17	<p>_____is open to multiple exploits, including viruses, worms, unauthorized access, snooping, and data tampering. Various security mechanisms are implemented in _____ to secure data and the storage networking infrastructure.</p> <p>A. SAN</p> <p>B. NAS</p> <p>C. DAS</p> <p>D. Application layer</p>	[1]	CO5	L2
18	<p>Windows supports two types of ACLs : discretionary access control lists (DACLS) and system access control lists (SACLs). Is the statement true or False?</p> <p>A. True</p> <p>B. False</p>	[1]	CO4	L2
19	<p>The cloud management and service creation tools layer Software is</p> <p>A. Physical and virtual infrastructure management software</p> <p>B. Unified management software</p> <p>C. User-access management software</p> <p>D. All of the above</p>	[1]	CO4	L2

CO PO Mapping

Course Outcomes	Modules covered	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
		O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	O1	O2	O3	O4	
CO1	Identify key challenges in managing information and analyze different storage networking technologies and virtualization	1	2	2	-	-	-	-	-	-	-	-	-	1	-	-	1	-

CO2	Explain components and the implementation of NAS, IPSAN, FcoE, iSCSI, FCIP	2	2	2	-	-	-	-	-	-	-	-	-	1	-	-	1	-
CO3	Describe CAS architecture and types of backup, Archive and Replication	2,3	2	2	-	-	-	-	-	-	-	-	-	1	-	-	1	-
CO4	Explain cloud computing and identify different storage virtualization technologies	4	2	2	-	-	-	-	-	-	-	-	-	1	-	-	1	-
CO5	Describe securing and storage infrastructure and management activities, monitoring the data centers.	5	2	2	-	-	-	-	-	-	-	-	-	1	-	-	1	-

COGNITIVE LEVEL	REVISED BLOOMS TAXONOMY KEYWORDS
L1	List, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
L2	summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
L3	Apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover.
L4	Analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer.
L5	Assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize.

PROGRAM OUTCOMES (PO), PROGRAM SPECIFIC OUTCOMES (PSO)				CORRELATION LEVELS	
PO1	Engineering knowledge	PO7	Environment and sustainability	0	No Correlation
PO2	Problem analysis	PO8	Ethics	1	Slight/Low
PO3	Design/development of solutions	PO9	Individual and team work	2	Moderate/ Medium
PO4	Conduct investigations of complex problems	PO10	Communication	3	Substantial/ High
PO5	Modern tool usage	PO11	Project management and finance		
PO6	The Engineer and society	PO12	Life-long learning		
PSO1	Develop applications using different stacks of web and programming technologies				
PSO2	Design and develop secure, parallel, distributed, networked, and digital systems				
PSO3	Apply software engineering methods to design, develop, test and manage software systems.				
PSO4	Develop intelligent applications for business and industry				

