

27. a. Analyze how flow control works in an FC network.	10	3	2	1,2,3, 4,9,12
<b>(OR)</b>				
b. Illustrate the components of CAS? Write the various limitations of CAS.	10	3	2	1,2,3, 4,9,12
28. a. Illustrate how the backup process is performed in NAS environment.	10	4	4	1,2,3, 4,9,12
<b>(OR)</b>				
b. Categorize and explain the various planned and unplanned occurrences of information unavailability in the context of data center operations.	10	4	3	1,2,3, 4,9,12
29. a. Explain in detail about one way and two way of securing implementation in IP SAN.	10	3	4	1,2,3, 4,9,12
<b>(OR)</b>				
b. Develop a checklist for auditing the security of a storage environment with SAN, NAS and ISCSI implementations. Explain how will you perform the audit.	10	3	4	1,2,3, 4,9,12
30. a. Illustrate the following with necessary diagram	5+5	4	5	1,2,9, 12
(i) Cloud deployment models				
(ii) Cloud service models				
<b>(OR)</b>				
b. Illustrate the various considerations for selecting the following	5+5	4	5	1,2,9, 12
(i) Public cloud service provider				
(ii) Private cloud service provider				

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Reg. No.

**B.Tech. DEGREE EXAMINATION, MAY 2022**

Fifth to Seventh Semester

**18CSE360T – INFORMATION STORAGE AND MANAGEMENT**

(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

**Note:**

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40<sup>th</sup> minute.
- (ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours

Max. Marks: 75

**PART – A (25 × 1 = 25 Marks)**

Answer **ALL** Questions

- |  | Marks | BL | CO | PO               |
|--|-------|----|----|------------------|
| 1. What is the key benefit of virtualization?<br>(A) Improved resource utilization    (B) Improved performance<br>(C) Enhanced interoperability        (D) Unlimited resource scaling  | 1     | 1  | 1  | 1,9,12           |
| 2. A disk drive has a rotational speed of 100 revolution per speed. What is the average rotational latency?<br>(A) 15 MS                                        (B) 10 MS<br>(C) 3 MS    (D) 5 MS                                  | 1     | 2  | 1  | 1,9,12           |
| 3. In external DAS architecture, the data transfer happens at<br>(A) Block level                                        (B) Stream level<br>(C) Through parallel bus                        (D) Through serial bus   | 1     | 1  | 1  | 1,9,12           |
| 4. The outermost zone is numbered as _____ in zone bit recording.<br>(A) 0    (B) 1<br>(C) 10    (D) 8   | 1     | 1  | 1  | 1,9,12           |
| 5. The set of rotating platters is sealed in a case called as<br>(A) Head disk assembly                        (B) Platters<br>(C) Spindle    (D) Drive assembly controllers   | 1     | 2  | 1  | 1,9,12           |
| 6. _____ authentication adds a second level of security by adding authentication on both directions in ISCSI protocol<br>(A) Unidirectional                                        (B) Directed<br>(C) Bidirectional                                        (D) End to end | 1     | 1  | 2  | 1,2,3,<br>4,9,12 |
| 7. Which type of file system is faster?<br>(A) Block level                                        (B) File level<br>(C) Flat address space                                (D) Hierarchical file system   | 1     | 2  | 2  | 1,2,3,<br>4,9,12 |
| 8. The ISCSI session-layer interface is responsible for handling logion, authentication, _____ and session management.<br>(A) Data maintenance                                (B) Containment<br>(C) Memory mapping                                (D) Target discovery    | 1     | 1  | 2  | 1,2,3,<br>4,9,12 |

9. Logic partitioning in SAN is called as 1 1 2 1,2,3,4,9,12  
 (A) Mapping (B) Clustering  
 (C) Zoning (D) Divisioning
10. The event notification is communicated to the administrator through in CAS 1 2 1 1,2,3,4,9,12  
 (A) SNMP, SMTP or E-mail (B) SNMP  
 (C) FTP (D) STTP
11. An approach for performing a backup in a virtualized environment 1 1 3 1,2,3,4,9,12  
 (A) Hypervisor (B) Image based backup  
 (C) Backup and archive (D) Target based data deduplication
12. \_\_\_\_\_ an industry standard TCP/IP based protocol specifically designed for a backup in a NAS environment 1 2 3 1,2,3,4,9,12  
 (A) Network data management protocol (B) Simple network management protocol  
 (C) LAN free based protocol (D) Backup topology
13. Backup method that are based on the state of the application when it is performed. 1 2 3 1,2,3,4,9,12  
 (A) Archival (B) Incremental  
 (C) Hot (D) Cumulative
14. The \_\_\_\_\_ is the most appropriate solution when a backup device needs to be shared among clients. 1 2 3 1,2,3,4,9,12  
 (A) Application server based backup (B) Direct attached backup  
 (C) Server less backup (D) SAN based backup topology
15. \_\_\_\_\_ backup copies the data that has changed since the last full or incremental backup which ever has occurred more recently. 1 2 3 1,2,3,4,9,12  
 (A) Incremental (B) Differential  
 (C) Backup granularity (D) Recovery process outage
16. Linux frameworks can store Kerberos verification key for an assistance head in \_\_\_\_\_ records. 1 1 4 1,2,3,4,9,12  
 (A) Client (B) Server  
 (C) Keytab (D) Business template
17. Which of the following is not a danger to data security? 1 2 4 1,2,3,4,9,12  
 (A) Disaster (B) Eavesdropping  
 (C) Information leakage (D) Unchanged default password
18. \_\_\_\_\_ is a control mechanism on the switches that segments the network into specific paths to be used for the data traffic. 1 1 4 1,2,3,4,9,12  
 (A) Snooping (B) Vulnerability  
 (C) Zoning (D) Denial of service

19. Which protocol provides strong authentication for client server application by using secret key cryptography? 1 1 4 1,2,3,4,9,12  
 (A) Kerberos (B) TNC  
 (C) Firewall (D) LDAP
20. \_\_\_\_\_ prevents unauthorized switch from joining any existing switch in the fabric 1 2 4 1,2,9,12  
 (A) Fabric binding (B) RBAC  
 (C) Access control list (D) Users
21. Which of the following organization does not provide OPEN ID Authentication? 1 1 5 1,2,9,12  
 (A) Google (B) Amazon  
 (C) Yahoo (D) IBM
22. The SLA serves as the foundation for expected level of service between 1 1 5 1,2,9,12  
 (A) Organization and provider (B) Owner and provider  
 (C) Consumer and provider (D) Organization and consumer
23. In cloud storage level, \_\_\_\_\_ is the lowest level of storage and closest to the hardware. 1 2 5 1,2,9,12  
 (A) Files (B) Dataset  
 (C) Blocks (D) Objects
24. \_\_\_\_\_ is hosted by an organization within its own data center. 1 2 5 1,2,9,12  
 (A) Externally hosted private cloud (B) On-premise private cloud  
 (C) Community cloud (D) Hybrid cloud
25. Which one of the following statement is false about grid computing? 1 1 5 1,2,9,12  
 (A) Does not break complex tasks into small operations (B) Enables parallel computing  
 (C) Is best for large workloads (D) Enable resources of numerous computers in a network to work on a single task at the same time

**PART – B (5 × 10 = 50 Marks)**  
 Answer ALL Questions

Marks BL CO PO

26. a. The average I/O size of an application is 64 K/B. The following specifications are available from the disk manufacturer. Average seek time = 5 ms, 7,200 rpm and transfer rate = 40 Mb/s. Determine the maximum IOPS that could be performed with this disk for the application using this case as example, explain relationship between disk utilization and IOPS. 10 4 1 1,2,9,12
- (OR)
- b. Elaborate the various cache parameter cache page size, read versus write cache allocation, cache prefetch size and write aside size. 10 3 1 1,2,9,12