

Hall Ticket Number:

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Code No. : 41516 ISM

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (I.T.) IV Year I-Semester Main Examinations, December-2017

Information Storage Management

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. Differentiate Data and Information.
2. Explain the terms Scalability and Data Integrity with respect to data center elements.
3. How a write operation is implemented with "Write - through cache" method?
4. List the limitations of Direct Attached Storage.
5. Differentiate Zoning and LUN Masking?
6. List and differentiate various iSCSI Topologies.
7. List the consequences of Downtime.
8. Give the benefits of using a virtual tape library over a physical tape library.
9. List the challenges of Storage Virtualization.
10. Vulnerability and Threat are the same or different? Justify your answer.

Part-B (5 × 10 = 50 Marks)

11. a) Explain how various core elements are essential for the basic functionality of a data center. [5]
b) Explain in detail about Information Life Cycle Management. [5]
12. a) Illustrate how various factors affect the performance of the Disk Drive in storage environment. [6]
b) What are the benefits of using RAID 3 in a backup application? [4]
13. a) Explain how the performance of NAS can be affected if the TCP window size at the sender and the receiver are not synchronized. [6]
b) Illustrate various components of SAN. [4]
14. a) Sketch and Explain the process of Backup and Restore Operations. [6]
b) A system has three components and requires all three to be operational 24 hours, Monday through Friday. Failure of component 1 occurs as follows: [4]
 - Monday = No failure
 - Tuesday = 5 a.m. to 7 a.m.
 - Wednesday = No failure
 - Thursday = 4 p.m. to 8 p.m.
 - Friday = 8 a.m. to 11 a.m.

Calculate the MTBF and MTTR of component 1

- 15. a) List and Elaborate various threats in a management access domain. [4]
- b) Explain storage migration using block-level storage virtualization. Compare this migration with traditional migration methods. [6]
- 16. a) Elaborate on the Security Implementations in NAS. [6]
- b) Compare and contrast IDE/ATA and SCSI Technologies. [4]
- 17. Answer any *two* of the following:
 - a) Comment on SAN Based Remote Replication. [5]
 - b) List out how different RAID levels used for various applications. [5]
 - c) Outline Key metrics to monitor Storage infrastructure. [5]

