Hall Ticket Number:

Code No.: 9132 M

VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
M.Tech. (CBCS : CSE) I-Semester Make up Examinations, March-2017

Information Storage and 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. Calculate how many blocks will a disk drive consist of with 16 sectors per track, 16 heads and 8 cylinders.

2. Why is RAID 1 not substitute for a backup? Justify your answer.

3. Define the various types of Zoning in SAN.

4. Discuss the components of NAS.

5. A system has a component which should always be available. Failure of this component occurs as follows:

    Monday   : No Failure
    Tuesday   : 5AM – 7AM
    Wednesday : No Failure
    Thursday : 4PM – 8PM
    Friday   : 8AM – 11AM   Calculate MTBF.

6. Classify the types of mixed backup topology.

7. Specify the role of hybrid cloud in the present day's data center.

8. Which of the following, Providers or Consumers, face the challenge of "Vendor Lock-in"?

9. Kerberos is a security solution used to protect which form of a storage solution.

10. What are the parameters that are examined in the storage infrastructure?

Part-B (5 × 10 = 50 Marks)

11. a) Explain the various factors that contribute to the growth of digital data. [4]

    b) Illustrate the components of an Intelligent Storage System. [6]

12. a) Explain how the performance of NAS can be affected if the TCP window size at the sender and receiver are not synchronized. [4]

    b) List the benefits of Object Based Storage. [6]

13. a) Summarize the process of identifying and eliminating redundant data using deduplication. [4]

    b) With the help of neat diagrams, Elaborate the Local Replication Technologies. [6]

14. a) Show 3 examples of each of the cloud service models. [4]

    b) List and define the enabling technologies of Cloud Computing. [6]

15. a) With a neat diagram, explain the implementation of intra-array storage tiering. [4]

    b) Elaborate the security domains used to identify the threats that apply to a storage network. [6]

16. a) Describe the components and architecture of Flash drives. [5]

    b) Discuss, with neat diagram, block level storage virtualization. [5]

17. Write short notes on any *two* of the following:
    a) Backup Granularity [5]
    b) Benefits of Cloud [5]
    c) Storage infrastructure management activities. [5]