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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2021

B.Tech 8th Semester

COURSE CODE: 18B1WCI736

MAX. MARKS: 35

COURSE NAME: STORAGE NETWORKS

COURSE CREDITS: 03

MAX. TIME: 2 Hours

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1.

- a) Explain the role of file system in context with storage networks. What are the various types of file systems used in it? Explain any one. **[5]**
- b) List the various management techniques used to manage the storage networks? How these techniques are found similar with the management techniques used in computer networks? Discuss any one technique that is only used in storage networks. **[5]**

Q2.

- a) Differentiate between: **[2 +2]**
 - Data Deduplication
 - Storage Virtualization.
- b) If we greatly simplify the OSI reference model then we can broadly divide the protocols for storage networks into three layers that built upon one another. What are these three layers? Also list the various protocols that falls under these layers. A diagram may be suitable for your answer. **[4]**

Q3.

- a) Discuss the hierarchical storage management technique in context to storage networks. How this technique manages the free space at local disk drives. Explain. **[4]**
- b) Nowadays, availability of data is becoming an important requirement for the organizations. List the various prime factors that are responsible for non-availability of data in a storage networks, also provide the solution for handling the failure situation to each your factor. **[4]**

Q4.

In an online organization various servers are installed, like proxy, database, Web, backup, file, etc., attached with a various intelligent disk subsystems, tape drives. For connectivity purpose HBA, switches and Ethernet topology are being used.

- a) What storage network, protocols and file systems will be used for above scenario? **[4]**
- b) Make a typical diagram for above scenario which shows all the above mentioned servers & connectivity components. **[5]**