Code No: 128ET **R15**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**B. Tech IV Year II Semester Examinations, May - 2019**
**STORAGE AREA NETWORKS**
**(Common to CSE, IT)**

**Time: 3 hours** **Max. Marks: 75**

**Note:** This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A**

**(25 Marks)**

1.a) What are the advantages of disk drive storage? [2]
b) What are the benefits of storage networks on business applications? [3]
c) What are the components of IP SAN? [2]
d) Write a short note on RAID 0. [3]
e) Write a short note on unplanned outages. [2]
f) Explain in brief about Business continuity. [3]
g) Write a short note on key management tasks in a data center? [2]
h) What are the key metrics to monitor for different components in a storage infrastructure? [3]
i) Explain the concept of Information security. [2]
j) List the common threats in each domain. [3]

**PART - B**

**(50 Marks)**

2. What are the solutions available for data storage? Explain in detail. [10]

**OR**

3. Explain about the functionalities of the core elements of a data center infrastructure. [10]

4. Briefly explain the concept of RAID and its levels. [10]

**OR**

5.a) Describe the storage system operations.
b) Compare and contrast the integrated storage system and modular storage systems. [5+5]

6. Identify the single points of failure in a storage infrastructure and also list solutions to mitigate these failures. [10]

**OR**

7.a) Briefly explain about planned outages.
b) Differentiate between business continuity and disaster recovery. [5+5]

8. Explain the replication technologies and their role in ensuring information availability and business continuity. [10]

**OR**

9. Explain the architecture of backup/recovery. [10]

10.a) Explain the concept of Storage Virtualization.
b) Explain about the critical security attributes for information systems. [5+5]

**OR**

11. Briefly explain about file-level virtualization technology. [10]

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