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Question Paper Code	13574
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**M.E. - DEGREE EXAMINATIONS, APRIL / MAY 2025**

Third Semester

**M.E. - Computer science and Engineering**

**20PCNEL308 - INFORMATION STORAGE MANAGEMENT**

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

	<i>Marks</i>	<i>K – Level</i>	<i>CO</i>
1. Write the importance of information storage.	2	K1	CO1
2. What are the key requirements of a data center?	2	K1	CO1
3. Define seek time.	2	K1	CO2
4. How data recovery is performed using hot spares?	2	K1	CO2
5. List the basic components of storage area networks (SAN).	2	K1	CO3
6. Explain zoning.	2	K2	CO3
7. What are the three key factors that define information availability?	2	K1	CO4
8. Define MTBF.	2	K1	CO4
9. Write some common threats along with corresponding mitigation methods in a storage networking environment.	2	K1	CO5
10. Explain Data consistency.	2	K2	CO5

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) Identify the key challenges in data storage and management today. How can organizations effectively address these challenges?	13	K3	CO1
<b>OR</b>			
b) Develop a detailed summary of the core elements of a data center, emphasizing their roles and significance in ensuring optimal performance.	13	K3	CO1
12. a) Compare and discuss the different levels of RAID.	13	K2	CO2
<b>OR</b>			
b) Explain the essential components of an intelligent storage system and delineate the interconnections among them with diagram.	13	K2	CO2
13. a) (i) Outline the key benefits of network-attached storage (NAS).	7	K2	CO3
(ii) Illustrate the primary components of a NAS with diagram.	6	K2	CO3

**OR**

b) What is FC-SAN? Explain the components of FC SAN infrastructure. 13 K1 CO3

14. a) (i) How does business continuity (BC) differ from disaster recovery (DR)? 6 K1 CO4

(ii) Examine the significance of recovery point objective (RPO) and recovery time objective (RTO) in business continuity planning. 7 K4 CO4

**OR**

b) Simplify the steps involved in backup and restore operations, providing a brief description of each step along with a necessary sketch. 13 K4 CO4

15. a) Describe how Key Management tasks are performed in an organization data center with suitable example. 13 K2 CO5

**OR**

b) Write a detailed note on Managing the storage Infrastructure. 13 K1 CO5

**PART - C (1× 15 = 15 Marks)**

16. a) Explain the functions of SAN Security architecture. 15 K2 CO6

**OR**

b) Describe in detail about storage virtualization technologies and also list its challenges. 15 K2 CO6