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10CS/IS765

**Seventh Semester B.E. Degree Examination, Feb./Mar. 2022**  
**Storage Area Networks**

Time: 3 hrs.

Max. Marks:100

**Note:** Answer any FIVE full questions, selecting atleast TWO questions from each part.

**PART - A**

- 1 a. Explain the Evolution of Storage technology. (05 Marks)  
b. Describe ILM implementation in detail with its benefits. (05 Marks)  
c. Explain Disk Drive Components, with suitable diagram. (10 Marks)
- 2 a. Explain the following with appropriate diagrams : (10 Marks)  
i) Raid 0 ii) Raid 1 iii) Nested Raid iv) Hot spares.  
b. With a neat diagram, explain the components of Intelligent Storage System (ISS). (05 Marks)  
c. With a neat diagram, explain the features of High end storage systems. (05 Marks)
- 3 a. Explain Disk Dive interface, with neat diagram. (05 Marks)  
b. Describe SCSI – 3 architecture in detail with diagram. (05 Marks)  
c. Explain FC connectivity with related diagram. (10 Marks)
- 4 a. Define NAS. List the benefits of NAS. Explain different NAS implementations in detail. (10 Marks)  
b. Mention the topologies of iSCSI connectivity. Briefly explain them. Also write the diagram of iSCSI protocol stack. (10 Marks)

**PART - B**

- 5 a. Define CAS. List the benefits of CAS. Explain CAS Architecture in detail. (10 Marks)  
b. What is Virtualization? Explain the types of storage virtualization in detail. (10 Marks)
- 6 a. Discuss “BC Planning Lifecycle”. (10 Marks)  
b. Discuss Backup and Restore operations in detail. (10 Marks)
- 7 a. What are the five main reasons to consider for creating one or more ‘Local Replicas’? Explain. (05 Marks)  
b. Define Data Consistency. Which are the important factors to consider ensuring the data consistency in all replication technologies? (07 Marks)  
c. Describe the two basic modes of ‘Remote Replication’ with a neat diagram. (08 Marks)
- 8 a. Which are the four primary security attributes or the services to migrate the threats? Write a brief note on all of them. (05 Marks)  
b. Discuss the following issues related to Risk management of the storage infrastructure  
i) Assets ii) Threats iii) Vulnerability. (15 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.