

**Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020**  
**Storage Area Networks**

Time: 3 hrs.

Max. Marks: 80

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

**Module-1**

- 1 a. Explain with neat diagram the Evolution of storage Architecture. (06 Marks)  
 b. Discuss core Elements of Data center and key characteristics of Data center. (10 Marks)

**OR**

- 2 a. Describe with neat block diagram the components of Intelligent storage system. (08 Marks)  
 b. With diagram explain different RAID Techniques. (08 Marks)

**Module-2**

- 3 a. Explain with neat diagram the components of Fiber Channels (FC) storage Area Networks. (08 Marks)  
 b. What is zoning? Explain its types. (08 Marks)

**OR**

- 4 a. Discuss different iSCSI Topologies with neat diagrams. (08 Marks)  
 b. Write short notes on Fiber Channel Over Ethernet (FCOE). (08 Marks)

**Module-3**

- 5 a. Discuss different back up Topologies. (08 Marks)  
 b. What is data deduplication ? Explain its implementation methods. (08 Marks)

**OR**

- 6 a. Explain local Replication technology using Host based methods. (06 Marks)  
 b. Write a short notes on the following ;  
     i) Three site Replications ii) Network based Remote Replication. (10 Marks)

**Module-4**

- 7 a. Explain the characteristics of clouds computing. (04 Marks)  
 b. Discuss cloud Deployment models. (06 Marks)  
 c. Explain Cloud computing Infrastructure. (06 Marks)

**OR**

- 8 a. Discuss the steps involved in transitioning from classic data center to cloud computing Environment service. (08 Marks)  
 b. Write a short notes on the following :  
     i) Business drives for cloud computing  
     ii) Cloud migration considerations. (08 Marks)

**Module-5**

- 9 a. Explain the different types of security threats. (06 Marks)  
 b. Discuss security solutions for FC – SAN and IP-SAN. (10 Marks)

**OR**

- 10 a. Explain the various information infrastructure components in classic and virtual Environments. (08 Marks)  
 b. Write a short notes on the following :  
     i) Information Life Cycle Management (ILM). ii) Storage Tiering. (08 Marks)

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