

Time 2.30 Hours

[Total Marks: 75]

- N. B.: (1) All questions are compulsory.  
(2) Make suitable assumptions wherever necessary and state the assumptions made.  
(3) Answers to the same question must be written together.  
(4) Numbers to the right indicate marks.  
(5) Draw neat labelled diagrams wherever necessary.  
(6) Use of Non-programmable calculators is allowed.

**Q1. Attempt the three of the following.**

(15 Marks)

- a) What are the types of data explain with suitable example.
- b) Explain need and applications of virtualization
- c) Explain the role of file system in storage.
- d) Explain DAS with its advantages & disadvantages.
- e) Explain the components and Architecture of Flash Drives

**Q.2. Attempt the three of the following.**

(15 Marks)

- a) What are the Components of an intelligent storage system?
- b) Explain the cache memory with its write operation.
- c) Explain the LUN with masking.
- d) Explain the SAN implementation with suitable diagram.
- e) What is zoning also explain its types.

**Q.3. Attempt the three of the following.**

(15 Marks)

- a) What are the factors affecting NAS performance?
- b) Write a short on content-addressed storage with its key features.
- c) Explain the fiber channel with its addressing.
- d) Explain the mesh topology with its advantages.
- e) What are the three ways of NAS implementation?

**Q.4. Attempt the three of the following.**

(15 Marks)

- a. What are the uses of local replications?
- b. What are Remote Replication Technologies?
- c. Explain Three-Site Replication.
- d. Explain in detail Cloud Enabling Technologies.
- e. What are the three models of Cloud service?

**Q.5. Attempt the three of the following.**

(15 Marks)

- a) Explain Information Security Framework.
- b) What are the basic SAN security mechanisms?
- c) Write a short note on RSA SecureID.
- d) What are the different types of storage security domains are available?
- e) Explain the Risk tried with suitable diagram.

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