

BE12-R4: INFORMATION STORAGE AND MANAGEMENT

NOTE:

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.
 - a) What is Data proliferation? What problems arise due to data proliferation?
 - b) Explain the term: Data Center. What is the significance of Data Center in storage technology?
 - c) What is Storage Array? Explain classification of storage array in terms of modular and monolithic. What is clustering in storage?
 - d) Describe the concept of Direct Attached Storage (DAS)? Explain internal and external DAS.
 - e) What is Business Continuity? Explain stages of business continuity (BC) planning lifecycle.
 - f) Why is Storage Area Network (SAN) required in organization? Explain characteristics of effective information management solution for SAN.
 - g) What is NAS? How does it differ from SAN?

(7x4)
2.
 - a) Which skills are required for storage management? What kinds of activities are performed in storage management?
 - b) How is data categorized in an enterprise? Describe in brief.
 - c) What is Information Lifecycle Management (ILM)? Explain characteristics and benefits of ILM.

(6+6+6)
3.
 - a) Briefly describe the functionality of RAID levels 1 through 5.
 - b) Explain features and benefits of Content Addressable Storage (CAS).
 - c) What is Backup? Which are three main purposes to do Backup? Explain methods and process of doing Backup.

(5+6+7)
4.
 - a) Describe the SCSI Command Model.
 - b) What kind of storage management initiative is taken by industry management standards like Storage Management Initiative- Specification (SMI-S) and Common Information Model (CIM)?
 - c) List the components of SAN with its significance.

(6+6+6)
5.
 - a) List SAN Fiber Channel topologies. Explain Core/Edge fabric with its benefits and limitations.
 - b) What are the merits and limitation of NAS solution?
 - c) Which are the factors which affect NAS performance and availability?

(8+4+6)
6.
 - a) What is FCIP? Explain the issue related to security and performance of FCIP.
 - b) What is IP-SAN? Explain various types of iSCSI connectivity.
 - c) Explain how LUN Masking and Zoning is used as a SAN security mechanism.

(6+6+6)
7.
 - a) Explain Integrated NAS implementation and Gateway NAS implementation. Describe Integrated NAS connectivity architecture Vs Gateway NAS connectivity architecture with diagram.
 - b) Explain Fiber Channel Architecture with respect to its protocol stack, FC Frame and FC data.

(9+9)