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 Center? How it accommodate storage need of modern era?

b) What is Hybrid Storage solution for Network Storage? How virtualization is related with it?

c) Explain Monolithic Storage array with its merit and demerits.

d) Explain terms: Zoning and Backup Granularity with example.

e) Explain infrastructure design principles of Fiber Channel.

f) Define terms NAS and SAN. Explain difference between them.

g) What is SNMP? Explain its configuration steps briefly.

(7x4)

2.

a) Explain Storage management activities with monitoring example.

b) How SCSI and iSCSI are differing? Explain topologies for iSCSI connectivity.

c) Explain Disaster recovery principles and techniques with respect to information storage on remote place.

(9+4+5)

3.

a) Explain Wide Area File Services (WAFS) and Hierarchical Storage technologies (HSM) in details.

b) Explain critiques of existing SAN design scenarios like issues related to:
Partial mesh, full mesh, core/edge and tiered design.

(9+9)

4.

a) Explain Fiber Channel Architecture with respect to its protocol stack, FC Frame and FC data.

b) Explain Storage Management Initiative- Specification (SMI-S) and Common Information Model (CIM).

(9+9)

5.

a) Explain, how failure analysis and fault tolerance are done in Data Center?

b) What are the key challenges encountered in managing informations?

c) Evolution of Storage Technology and Architecture.

(8+4+6)

6.

a) Explain benefits of Information Lifecycle Management.

b) Explain terms: LUN and LUN Masking. Explain how it is related with SAN management activities.

c) Discuss various factors that affect NAS performance and availability.

(6+6+6)

7.

a) Why is RAID-1 not a substitute for a backup?

b) What are the components of intelligent storage system?

c) What factors effect storage volume of Digital Data?

(6+8+4)