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 information? List various challenges for managing information in network.
b) What is significance of Data Center in information storage?
c) What is Storage Array? Explain modular Vs monolithic Storage array classification with example.
d) Explain the following terms:
   Seek Time, Data Transfer Rate, Rotational Latency, Zoning.
e) What are the advantages of fiber channel protocol? Explain protocol stack of it.
f) Explain term: SAN. What is significance of SAN in any enterprise? List major characteristics of it.
g) What is Data Proliferation? What problems arise due to Data Proliferation?

   (7x4)

2.

a) What is Storage management? List various skill sets and activities which required performing to handle storage management.
b) What is intelligent disk sub system? Explain it with its components.
c) What is Information Lifecycle Management (ILM)? Explain implementation of ILM.

   (6+6+6)

3.

a) What is RAID? What is impact of RAID on disk performance related to IOPS? Explain various RAID Levels in brief.
b) What is CAS? Describe the CAS Architecture. How to do object storage and retrieval in CAS?

   (9+9)

4.

a) What is Disaster in terms of data and information storage? How it is related to Business Continuity? List various disaster recovery principles and techniques.
b) List and explain various design criteria and design components of SAN.

   (9+9)

5.

a) What is significance and advantages of NAS in local area network for sharing data?
b) List various industry standards for managing and monitoring Storage management activities.
c) Explain how performance of NAS can be affected if the TCP window size at the sender and at the receiver are not synchronized.

   (8+4+6)
6.  
   a) What is FC protocol? Explain FC protocol stack.  
   b) What is SCSI? Explain SCSI command model.  
   c) Explain LUN and LUN masking, activities associated with design of SAN.  

(6+6+6)

7.  
   a) What is difference between general purpose component and NAS device? Explain various components and implementation steps of NAS in detail.  
   b) What is core element of Data Center? Explain how failure analysis is done at Data Center and how fault tolerance mechanism implemented.  

(9+9)