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Question Paper Code: 39202

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Elective

Computer Science and Engineering

01UCS902 - INFORMATION STORAGE MANAGEMENT

(Common to Information Technology)

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Differentiate between structured and unstructured data. Give Example.
2. State the function of R/W head when reading and writing the data on the platter.
3. List the factors that affect NAS performance at different levels.
4. What topology is followed by fibre channel arbitrated loop?
5. Define business continuity and information availability.
6. Discuss about virtual provisioning.
7. Name few services provided by cloud computing to its users.
8. List out some cloud enabling technologies.
9. List the 4 primary services of storage security framework.
10. State the importance of secured storage infrastructure.

PART - B (5 x 16 = 80 Marks)

11. (a) A hospital uses an application that stores patient data in the form of large binary objects in an Oracle database. The application is hosted on a UNIX server, and the hospital staff accesses the records through a Gigabit Ethernet backbone. The storage array of the server has 6 terabytes of usable capacity. (i) Explain the core elements of the data center. What are the typical challenges the storage management team may face in meeting the service level demands of the hospital staff? (ii) Describe how the value of this patient data might change over time. (16)

Or

(b) Discuss in detail about RAID levels. (16)

12. (a) Explain fiber channel architecture with respect to its protocol stack, FC frame and FC data. (16)

Or

(b) Explain the architecture of content addressed storage. (16)

13. (a) Discuss the effects of a source failure in a three-site replication for the following implementations:

(i) Multihop – Synchronous + Disk buffered

(ii) Multihop – Synchronous + Asynchronous

(iii) Multitarget (16)

Or

(b) Describe backup topologies in backup environment and network attached storage environment. (16)

14. (a) Describe any four challenges of cloud computing in detail. (16)

Or

(b) Discuss in detail about the deployment models of cloud computing. (16)

15. (a) List the major security domains. Explain about the security threats in each domain and the controls that can be applied. (16)

Or

(b) Give a brief note on implementation of ILM with an example scenario. (16)