Reg. No. : | | | | | | | | | | |

Question Paper Code: 42922

M.E. DEGREE EXAMINATION, NOVEMBER 2015

Elective

Computer Science and Engineering

14PCS506 – INFORMATION STORAGE MANAGEMENT

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Average response time is calculated by

(a) service time/ 1- utilization (b) service time/1+utilization

(c) service rate – arrival rate (d) service rate + arrival rate

2. Which is known as High-end storage systems?

(a) active-passive arrays (b) active path

(c) active-active array (d) storage array

3. Network-Attached Storage is a

(a) storage architecture (b) file serving application

(c) server (d) database

4. Disk-buffered replication based on

(a) remote replication (b) local replication

(c) combination of remote and local replication (d) database replication

5. Rainfinity is a dedicated hardware/software solution for

(a) file-level virtualization (b) block level virtualization

(c) virtual machine file system (d) raw device mapping

PART - B (5 x 3 = 15 Marks)

6. Give some examples of business data.
7. Differentiate internal transfer rate and external transfer rate.
8. List the benefits of NAS.
9. How to measure the information availability?
10. Write the challenges of storage virtualization.

PART - C (5 x 16 = 80 Marks)

11. (a) (i) What is Information Lifecycle? Explain Information Lifecycle Management and its implementation. (8)

(ii) Discuss about the evolution of Storage Technology and their architecture. (8)

Or

(b) (i) What are the key requirements for Data Centre elements and explain in detail. (8)

(ii) Elaborate the challenges in data storage and data management. (8)

12. (a) Explain the fundamental laws for disk performance and analyse the various factors that affect the performance of disk drives. (16)

Or

(b) Explain RAID array components and compare different RAID types. (16)

13. (a) (i) Explain Fibre Channel Architecture in detail. (8)

(ii) Discuss about FC Topologies. (8)

Or

(b) (i) Explain the components of NAS in detail. (8)

(ii) Explain the process of data storage and retrieval in CAS with one example. (8)

14. (a) (i) Give the comparison of Local Replication Technologies. (8)

(ii) Analyse the various modes of Remote Replication. (8)

Or

(b) Explain the backup recovery architecture and its different topologies in detail. (16)

15. (a) (i) Define virtualization and explain the types of storage virtualization. (8)

(ii) Explain about configuration of virtualised storage. (8)

Or

(b) Explain the categories of security domains of storage and analyze the common threats. (16)