Total No. of Questions : 5]   [Total No. of Printed Pages :2

Roll No ....

IT-502
B.E. V Semester
Examination, December 2016
Information Storage and Management

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) Why do we need data categorization?
   b) Write the two basic differences between SATA and SAS.
   c) What is data proliferation?
   d) What do you understand by the Information lifecycle management? What is the significance of the same in Information management?

   OR

   Discuss in detail about the evolution of various storage technique.

2. a) How many minimum disks required for
      i) RAID Level 1   ii) RAID Level 2
   b) What is HOT Swapping?
   c) Differentiate between integrated and modular arrays of disc.
   d) Discuss the advantages and disadvantages of following RAID levels
      i) Level 1   ii) Level 0
      iii) Level 10   iv) Level 5
      v) Level 6

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OR

Consider a disk I/O system in which an I/O request arrives at of the 80 IOPS. The desk service time is 7 ms Compute the utilisation of I/O controller and average queue size.

3. a) What are the benefits of DAS (Direct Attached Storage)?
   b) What is clustering in storage?
   c) Differentiate between SAN and NAS.
   d) Discuss the NFS in detail.

   OR

   What is Backup? Which are three main purpose to do Backup? Explain methods and process of doing Backup.

4. a) Why do we need Data Centres?
   b) What is DRC?
   c) Differentiate between reliability and availability.
   d) What kind of storage management standards like Storage Management Initiative Specification (SMIS) and Common Information Model (CIM) is initiative taken by industry Management?

   OR

   Explain storage security domain with reference to threats, availability control and examples.

5. a) What do you understand by software as service?
   b) Write the name of two cloud and one cloud OS.
   c) What is difference between scalability and elasticity for cloud computing?
   d) Discuss the essential characteristics of cloud computing.

   OR

   What is secure execution environment and communication in cloud? Explain different threats and vulnerabilities specific to virtual machine.

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