

Total No. of Questions: 6

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Enrollment No.....



Faculty of Engineering  
End Sem (Odd) Examination Dec-2022  
CS3EL03 Information Storage & Management

Programme: B.Tech.

Branch/Specialisation: CSE

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. \_\_\_\_\_ is the act of informing or the state of being informed. 1  
(a) Data (b) System  
(c) Management (d) Information
- ii. The general transformation cycle for information is- 1  
(a) Information to data to knowledge  
(b) Knowledge to data to information  
(c) Data to knowledge to information  
(d) Data to information to knowledge
- iii. \_\_\_\_\_ is used for writing/reading of data to/from a magnetic ribbon. 1  
(a) Magnetic disk (b) Magnetic tape  
(c) Magnetic frames (d) Magnetic Ribbon
- iv. Time to move read/write heads to a spot-on medium is defined as the- 1  
(a) Read time (b) Seek time  
(c) Transfer time (d) Average access time
- v. What is the most basic level of storage? 1  
(a) SAN (b) DAS (c) NAS (d) ISCSI
- vi. A NAS solution is most appropriate for what type of data environment- 1  
(a) Secured Access (b) Shared access  
(c) Remote access (d) Parallel access

P.T.O.

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- vii. In which of the following types of virtualizations are applications stored and executed on the server? **1**  
 (a) Application virtualization (b) Storage virtualization  
 (c) Network virtualization (d) Server virtualization
- viii. Clients use which protocol to discover SMI Agents on Storage Area Network? **1**  
 (a) SLP (Service Location Protocol)  
 (b) AGP (Agent Discovery Protocol)  
 (c) SMIP (SMI Protocol)  
 (d) None of these
- ix. \_\_\_\_\_ refers to the location and management of the cloud's infrastructure **1**  
 (a) Service (b) Deployment  
 (c) Application (d) None of these
- x. What is cloud computing? **1**  
 (a) Cloud computing means providing services like storage, servers, database, networking, etc  
 (b) Cloud computing means storing data in a database  
 (c) Cloud computing is a tool used to create an application  
 (d) None of these
- Q.2 i. Write the definition of data proliferation. **2**  
 ii. What is data categorization? Give the example of each. **3**  
 iii. Explain information lifecycle management. **5**
- OR iv. Explain the term data centre and its key requirements. **5**
- Q.3 i. Explain the components of an intelligent storage system. **2**  
 ii. What are the RAID levels & parity algorithms explain with proper diagram? **8**
- OR iii. Explain front end to host storage provisioning, mapping and operation. **8**
- Q.4 i. Give the difference between DAS and SAN. **3**  
 ii. What is Direct Attached Storage (DAS)? Write down its security, limitations, advantages and disadvantages. **7**

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- OR iii. Explain SAN, CAS and also write their limitation. **7**
- Q.5 i. What is virtualization? Explain with example. **4**  
 ii. What is disaster recovery? Explain the importance of disaster recovery planning. **6**
- OR iii. Explain principles managing & monitoring also explain industry management standards (SNMP, SMI-S, CIM). **6**
- Q.6 Attempt any two:  
 i. What are the advantages of cloud computing? **5**  
 ii. Write a short note on- **5**  
 (a) Cloud security (b) Cloud storage  
 iii. What is autonomic computing? Also explain SPI. **5**

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**Marking Scheme**  
**CS3EL03 Information Storage & Management**

Q.1	i	_____ is the act of informing or the state of being informed. d) Information 1 Marks.	<b>1</b>
	ii	The general transformation cycle for information is: (d) Data to information to knowledge.	<b>1</b>
	iii	_____ is used for writing/reading of data to/from a magnetic ribbon. b) Magnetic tape 1 Marks.	<b>1</b>
	i.	Time to move read/write heads to a spot on medium is defined as the (b) Seek Time 1 Marks.	<b>1</b>
	ii.	What is the most basic level of storage b) DAS 1 Marks.	<b>1</b>
	iii.	A NAS solution is most appropriate for what type of data environment. b) Shared access 1 Marks.	<b>1</b>
	iv.	In which of the following types of virtualizations are applications stored and executed on the server? (b) Storage Virtualization 1 Marks.	<b>1</b>
	v.	Clients use which protocol to discover SMI Agents on Storage Area Network? a) SLP (Service Location Protocol) 1 Marks.	<b>1</b>
	vi.	..... refers to the location and management of the cloud's Infrastructure. (b) Deployment 1 Marks.	<b>1</b>
	vii.	What is Cloud Computing? a) Cloud Computing means providing services like storage, servers, database, networking, etc 1 Marks.	<b>1</b>
Q.2	i.	Write the definition of data proliferation. Definition -2 marks	<b>2</b>

	ii.	What is Data categorization, give the example of each. Each -1 mark	<b>3</b>
	iii.	Explain Information Lifecycle Management. Explanation -5marks	<b>5</b>
OR	iv.	Explain the term data centre and its key requirements. Explanation 2 Marks. Requirement 3 Marks.	<b>5</b>
Q.3	i.	Explain the components of an intelligent storage system. Introduction 2 Marks.	<b>2</b>
	ii.	What are the RAID levels & parity algorithms explain with proper diagram. Introduction 2 Marks Explanation 6 Marks.	<b>8</b>
OR	iii.	Explain Front end to host storage provisioning, mapping and operation. Introduction 2 Marks Explanation 6 Marks.	<b>8</b>
Q.4	i.	Give the difference between DAS and SAN. For Each 1 Difference 1 Marks (At least 3)	<b>3</b>
	ii.	What is Direct Attached Storage (DAS)? Write down its security, limitations, advantages and disadvantages? Introduction 2 Marks Explanation 5 Marks.	<b>7</b>
OR	iii.	Explain JBOD, DAS, NAS, SAN & CAS and their limitation. Introduction 2 Marks Explanation 5 Marks.	<b>7</b>
Q.5	i.	What is virtualization? Explain with example. Introduction 2 Marks. Explanation 2 Marks.	<b>4</b>
	ii.	What is disaster recovery? Explain the importance of disaster recovery planning. Introduction 2 Marks. Explanation 4Marks.	<b>6</b>
OR	iii.	Explain Principles Managing & Monitoring also explain Industry management standards (SNMP, SMI-S, CIM). Introduction 2 Marks.	<b>6</b>

		Explanation 4Marks.	
Q.6		Attempt any two:	
	i.	What are the advantages of Cloud Computing? For Each Advantages 1 Marks each (At least 5 ).	<b>5</b>
	ii.	Write a short note on- (a)Cloud security (b) Cloud storage Cloud Security explanation 2 ½ Marks. Cloud Storage explanation 2 ½ Marks.	<b>5</b>
	iii.	What is autonomic computing? Also explain SPI. Introduction 2 Marks Explanation 3 Marks.	<b>5</b>