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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VI - THEORY EXAMINATION (2025 - 2026)

Subject: Cloud Storage Management

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

- (1.1) _____ is the most refined and restrictive service model. (CO1, K1) 1
- (a) IaaS
- (b) CaaS
- (c) PaaS
- (d) All of the mentioned
- (1.2) Which of the following is not an essential cloud characteristic? (CO1, K1) 1
- (a) Elasticity
- (b) Scalability
- (c) On Demand
- (d) Pay per click
- (1.3) Select the right option which define a gap in coverage in terms of security. (CO2, K1) 1
- (a) A vulnerability in a system
- (b) An area of a network that cannot be monitored
- (c) A security breach that has not been detected
- (d) An area of a network that is not accessible
- (1.4) Select the right option which defines the best way to identify potential security vulnerabilities. (CO2, K2) 1
- (a) Regularly conducting security audits
- (b) Increasing network speeds
- (c) Implementing new hardware
- (d) Only allowing authorized users to access the network

- (1.5) Tired Storage: _____. (CO3, K1) 1
- (a) Increases storage cost
 - (b) Uncategorised data
 - (c) Reduces storage cost
 - (d) None of the mentioned
- (1.6) The addition of a software package on top of a cloud storage volume makes most cloud storage offerings conform to a _____ as a Service model. (CO3, K2) 1
- (a) Software
 - (b) Platform
 - (c) Analytics
 - (d) None of the mentioned
- (1.7) Data Replication ensures_____ (CO4, K2). 1
- (a) Scalability
 - (b) Automation
 - (c) High Availability
 - (d) None of the mentioned
- (1.8) The process of importing/extracting data from various source systems and loading into one target system is known as _____ (CO4, K1). 1
- (a) Data Cleansing
 - (b) Data Migration
 - (c) Data Synchronisation
 - (d) Data Mining
- (1.9) Microsoft Azure offers several cloud storage services, including _____. (CO5, K1) 1
- (a) file storage
 - (b) object storage
 - (c) Data lake storage
 - (d) All of these
- (1.10) Cloud data management lets users scale services up or down as needed. More storage or compute power can be added when needed to accommodate _____. (CO5, K2) 1
- (a) continuous workloads
 - (b) changing workloads
 - (c) fixed workloads
 - (d) None of these

2. Attempt all parts:-

- (2.1) How does virtualization improve resource utilization? (CO1, K2) 2
- (2.2) How can blind spots lead to security threats in a data center?(CO2, K2) 2
- (2.3) Define Mission-critical data category. (CO3, K1) 2
- (2.4) Define 'Lift and Shift' strategy (CO4, K1). 2
- (2.5) Define Kubernetes. (CO5, K1) 2

SECTION-B

30

Answer any one of the following:-

- (3.1) Explain any five networking issues in cloud storage. (CO1, K2) 6
- (3.2) Explain Hybrid cloud with their advantage and disadvantage. (CO1, K2) 6

Answer any one of the following:-

- (3.3) Define dark territories in cloud data center with suitable example. (CO2, K2) 6
- (3.4) Explain digital assets in cloud storage with suitable example. (CO2, K2) 6

Answer any one of the following:-

- (3.5) Differentiate methods of storage virtualization. (CO3, K4) 6
- (3.6) Discuss Amazon EFS. (CO3, K2) 6

Answer any one of the following:-

- (3.7) Write Short notes on: (i) Data Archiving (ii) Data Replication (CO4, K2). 6
- (3.8) Write Differences between ETL and ELT (CO4, K4). 6

Answer any one of the following:-

- (3.9) Explain the migration strategy and results of Betabrand. (CO5, K2) 6
- (3.10) Justify the statement "Cloud-based data are generally more secure than data stored on a home computer connected to the Internet" in your own words. (CO5, K3) 6

SECTION-C

50

4. Answer any one of the following:-

- (4.1) Krish must redesign his organization's storage model by aligning it with virtualization and IT cloud trends. Propose a detailed architecture plan. (CO1, K6) 10
- (4.2) Deveshi launches a fintech startup and wants to leverage cloud-based storage services. Demonstrate how IT clouds can be integrated into her startup's data access model. (CO1, K3) 10

5. Answer any one of the following:-

- (5.1) Chitvan upgrades the infrastructure of a finance firm. Create a roadmap covering blind spot elimination and threat prevention. (CO2, K6) 10
- (5.2) Discuss any six cloud data management mistakes in cloud storage with suitable real life example. (CO2, K2) 10

6. Answer any one of the following:-

- (6.1) Rohit is asked to educate clients on various AWS and Google Cloud storage types. Help him frame a decision matrix based on use cases. (CO3, K6) 10
- (6.2) Ashish designs a backup and archival solution for a government project. Plan the storage architecture considering hybrid cloud.(CO3, K6) 10

7. Answer any one of the following:-

- (7.1) Vivek executes multi-cloud data movement for an MNC. Structure his plan using best practices.(CO4, K6) 10
- (7.2) Deveshi is preparing a cloud migration plan. Help her evaluate IaaS vs PaaS vs SaaS migration impacts on legacy systems.(CO4, K5) 10

8. Answer any one of the following:-

- (8.1) Kashish is researching cost-benefit outcomes of cloud migrations. Assist her in preparing a data-backed analysis of a recent migration case. (CO5, K5) 10

- (8.2) Kapil is working with a logistics firm struggling with their physical infrastructure. Draft a transformation roadmap based on a similar case study.(CO5, K6) 10

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