NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VI - THEORY EXAMINATION (2023 - 2024)

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-a. The componentized nature of SaaS solutions enables many solutions to support a feature called _____. (CO1)   1

    (a)   workspace

    (b)   workloads

    (c)   mashups

    (d)   all of the mentioned

1-b. Open source software used in a SaaS is called _____ SaaS. (CO1)   1

    (a)   closed

    (b)   free

    (c)   open

    (d)   all of the mentioned

1-c. Select the right option which define a gap in coverage in terms of security. (CO2)   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-d. Select the right option which define the best way to identify potential security vulnerabilities. (CO2)   1

    (a)   Regularly conducting security audits

(b) Increasing network speeds

(c) Implementing new hardware

(d) Only allowing authorized users to access the network

1-e.   One of the following cloud storage is mainly meant for developers and to support applications built using Web services. (CO3)   1

(a) Unmanaged

(b) Managed

(c) Disk

(d) All of the mentioned

1-f.   Cloud storage provides: (CO3)   1

(a) Reliability

(b) Availability

(c) serviceability

(d) All of the mentioned

1-g.   Select the following cloud storage that is consumed by file sharing software. (CO4)   1

(a) Managed

(b) Replicated

(c) Unmanaged

(d) None of the mentioned

1-h.   From Migration point of View, Data profiling is. (CO4)   1

(a) Fixing the data anomalies

(b) Quantifying the data anomalies

(c) Finalizing the business rule

(d) None of the mentioned

1-i.   When adopting a cloud storage strategy, enterprises have _ basic options for cloud architecture. (CO5)   1

(a) one

(b) two

(c) three

(d) four

1-j.   Microsoft Azure offers several cloud storage services, including (CO5)   1

(a) file storage

(b) object storage

(c) Data lake storage

(d) All of these

2. Attempt all parts:-

2.a.   Discuss any two IT Challenges in cloud storage. (CO1)   2

2.b.	Define Data infrastructure for cloud storage. (CO2)	2
2.c.	Define Mission-critical data category. (CO3)	2
2.d.	Define Reverse ETL. (CO4)	2
2.e.	Explain the process of cloud streamlines load testing. (CO5)	2

SECTION-B   30

3. Answer any <u>five</u> of the following:-

3-a.	Define virtualization in cloud storage with suitable example. (CO1)	6
3-b.	Define I/O connectivity related cloud storage with suitable example. (CO1)	6
3-c.	Discuss all the data management strategy in cloud storage with suitable example. (CO2)	6
3-d.	Define systematic approach to data security in cloud storage with suitable example. (CO2)	6
3-e.	Illustrate needs of Reliability, Availability and Serviceability in cloud storage. (CO3)	6
3.f.	Discuss IaaS migration and its benefits in detail. (CO4)	6
3.g.	Justify the statement "Immutable infrastructure vastly improves deployments". (CO5)	6

SECTION-C   50

4. Answer any <u>one</u> of the following:-

4-a.	Discuss storage virtualization with suitable example and their scope. (CO1)	10
4-b.	Discuss switches and it's application with suitable example. (CO1)	10

5. Answer any <u>one</u> of the following:-

5-a.	Discuss all the data management strategy in cloud storage with proper flow diagram and suitable example. (CO2)	10
5-b.	Discuss tiers optimization in cloud storage with suitable example and also discuss their advantage and disadvantage. (CO2)	10

6. Answer any <u>one</u> of the following:-

6-a.	Differentiate various storage media solutions over different parameters like: Performance, Cost, Capacity and Endurance. (CO3)	10
6-b.	Differentiate Block-based storage virtualization with File based storage virtualization on the basis of their usage. (CO3)	10

7. Answer any <u>one</u> of the following:-

7-a.	Differentiate IaaS Migration, PaaS migration and SaaS Migration. (CO4)	10
7-b.	Differentiate the strategies (i) Lift and Shift (ii) Move and Improve (iii) Rip and Replace with each other. (CO4)	10

8. Answer any <u>one</u> of the following:-

8-a.	Justify the statement "It is a great journey for TCS partnering with Walgreens and Microsoft to build a modern pharmacy platform with Azure, enabling intelligent	10

data tools at the fingertips of the pharmacists to enable future growth." (CO5)

8-b. "MineSense opted for a cloud-based solution that has helped to lower DBA 10 workloads by 65%", Justify. (CO5)