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Subject Code:- AMICSAI0611

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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

M.Tech (Integrated)

SEM: VI - THEORY EXAMINATION (20 - 20.....)

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. Select one of the following software that can be used to implement load balancing. (CO1, K2) 1
- (a) Apache mod_balancer
 - (b) Apache mod_proxy_balancer
 - (c) F6's BigIP
 - (d) All of the mentioned
- 1-b. An example of hybrid cloud is. (CO1, K1) 1
- (a) (Ubuntu Enterprise Cloud – UEC
 - (b) (VMware Cloud Infrastructure Suite
 - (c) (Eucalyptus
 - (d) (VMware vCloud
- 1-c. Choose one option which is NOT a potential security risk in cloud storage. (CO2, K1) 1
- (a) Insider attacks
 - (b) Third-party access
 - (c) Server downtime
 - (d) Lack of integration with legacy systems
- 1-d. Select one of the following which is NOT a best practice for disposing of digital assets and technology. (CO2, K1) 1

- (a) Securely erasing all data
 - (b) Physically destroying the hardware
 - (c) Donating the hardware to a charity
 - (d) Following a formal disposal policy
- 1-e. By default, each Compute Engine virtual machine (VM) instance has/have _____ boot persistent disk. (CO3, K1) 1
- (a) Multi
 - (b) Single
 - (c) Dual
 - (d) None of the mentioned
- 1-f. Storage Gateway solves: _____. (CO3, K1) 1
- (a) On-premises challenges
 - (b) Cloud storage challenges
 - (c) Hybrid Cloud Storage Challenges
 - (d) None of the mentioned
- 1-g. Snowball devices are designed to be requested and used within _____ AWS Region (CO4, K1). 1
- (a) Multi
 - (b) Global
 - (c) Single
 - (d) All of the mentioned
- 1-h. Assessment of Data Migration viability means _____ (CO4, K2). 1
- (a) Assessment of Timelines
 - (b) Assessment of Tools/Technology
 - (c) Assessment of Legacy Sources/Risks/Mitigation
 - (d) All of the mentioned
- 1-i. CC refers to a model that enables access through the network, according to demand, to a shared pool of _____. (CO5, K2) 1
- (a) Softwares
 - (b) computing resources
 - (c) Hardware
 - (d) None of these
- 1-j. The best cloud storage management services make it simple and easy to manage your data accessibility across _____. (CO5, K2) 1
- (a) multiple platforms
 - (b) single platforms
 - (c) synchronous platforms
 - (d) asynchronous platforms

2. Attempt all parts:-

- | | | |
|------|--|---|
| 2.a. | Explain Network virtualization. (CO1, K2) | 2 |
| 2.b. | Discuss Virtual servers. (CO2, K2) | 2 |
| 2.c. | Define Persistent disk. (CO3, K1) | 2 |
| 2.d. | Define ETL (CO4, K1). | 2 |
| 2.e. | Explain AWS Marketplace with a suitable example. (CO5, K2) | 2 |

SECTION-B

30

3. Answer any five of the following:-

- | | | |
|------|--|---|
| 3-a. | Define Routers with their advantage and disadvantage. (CO1, K2) | 6 |
| 3-b. | Discuss any five points related to importance of virtualization in cloud storage. (CO1, K2) | 6 |
| 3-c. | Define systematic approach to data security in cloud storage with suitable example. (CO2, K2) | 6 |
| 3-d. | Discuss all the data management strategy in cloud storage with suitable example. (CO2, K2) | 6 |
| 3.e. | Define following: (i) S3 versioning (ii) S3 Object lock (iii) S3 Replication. (CO3, K1) | 6 |
| 3.f. | Write Short notes on: (i) Lift and Shift (ii) Move and Improve (CO4, K2). | 6 |
| 3.g. | Justify the statement "Scalability is central to meeting the changing needs of dynamic e-commerce businesses." (CO5, K3) | 6 |

SECTION-C

50

4. Answer any one of the following:-

- | | | |
|------|--|----|
| 4-a. | Define Cloud storage with suitable example and also discuss its advantages and disadvantages. (CO1, K2) | 10 |
| 4-b. | Rohit develops an access control model for data stored in multiple virtualized environments. Develop his model with technical justification. (CO1, K6) | 10 |

5. Answer any one of the following:-

- | | | |
|------|--|----|
| 5-a. | Define Data infrastructure for cloud storage with proper flow diagram and suitable example. (CO2, K2) | 10 |
| 5-b. | Muskan handles sensitive data and wants to dispose of legacy storage without leaving digital footprints. Outline a secure disposal plan. (CO2, K3) | 10 |

6. Answer any one of the following:-

- | | | |
|------|---|----|
| 6-a. | Review the Persistent Disk of GCP and also discuss its types. (CO3, K2) | 10 |
| 6-b. | Explain various features of Amazon EBS. (CO3, K2) | 10 |

7. Answer any one of the following:-

- | | | |
|------|---|----|
| 7-a. | Discuss challenges in Data Synchronisation and also brief the role of data integration in data synchronisation (CO4, K2). | 10 |
| 7-b. | Write a note on migration planning steps and explain how it supports successful | 10 |

cloud adoption (CO4, K3).

8. Answer any one of the following:-

- | | | |
|------|---|----|
| 8-a. | Describe the challenges and outcomes of Siemens Mobility using AWS cloud services. (CO5, K2) | 10 |
| 8-b. | Akash is studying a company that failed to maintain its infrastructure due to bare metal limitations. Prepare an evaluation of what went wrong and propose a recovery plan. (CO5, K5) | 10 |

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