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

B.Tech

SEM: V - THEORY EXAMINATION (2024 - 2025)

Subject: Cloud Virtualization

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. Technique use to provide system resource access to virtual machines.(CO1,K1)   1

    (a)   VMM

    (b)   VMC

    (c)   VNM

    (d)   All of these

1-b. The _____ is what controls and allocates what portion of hardware resources each operating system should get, in order every one of them to get what they need and not to disrupt each other. (CO1, K1)   1

    (a)   Virtual machine

    (b)   Virtual computing

    (c)   Virtual cloud

    (d)   hypervisior

1-c. IPsec in the Azure platform refer to….(CO2,K2)   1

    (a)   Internet Protocol Security protocol suite

    (b)   Internet Standard

    (c)   Commodity servers

    (d)   All of the mentioned

1-d. Applications and services that run on a distributed network using virtualized resources is known as _____ (CO2,K1)   1

- (a) Parallel computing
- (b) Soft computing
- (c) Distributed computing
- (d) Cloud computing

1-e. IRC stands for: (CO3,K1)   1
- (a) Internal Relay Chat
- (b) Immediate Relay Chat
- (c) Internet Relay Chat
- (d) Infrastructure Relay Chat

1-f. For Authentication we use_____ in AWS.(CO3,K1)   1
- (a) ID & Password
- (b) Access key
- (c) Session Key
- (d) All of the above

1-g. The following is also referred to edge computing.(CO4,K1)   1
- (a) CloudWave
- (b) CloudFront
- (c) CloudSpot
- (d) All of the mentioned

1-h. Amazon _____ cloud-based storage system allows you to store data objects ranging in size from 1 byte up to 5GB.(CO4,K2)   1
- (a) S1
- (b) S2
- (c) S3
- (d) S4

1-i. Amazon Simple Queue Service allows users to transmit any amount of data through the Web without _____ responsibility.(CO5,K1)   1
- (a) Managerial
- (b) Requesting
- (c) Administrative
- (d) Solicited

1-j. Cloud Services have a____ relationship with their customers. (CO5,K1)   1
- (a) One to Many
- (b) Many to Many
- (c) One to one
- (d) Many to one

2. Attempt all parts:-

2.a. Explain Host in virtual machine.(CO1,K2)   2

2.b.	Write any four advantage of SaaS.(CO2,K1)	2
2.c.	Describe Amazon EFS.(CO3,K2)	2
2.d.	Define Amazon Glacier.(CO4,K1)	2
2.e.	Name two security challenges in Cloud Computing.(CO5,K1)	2

SECTION-B   30

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

3-a.	Explain benefits of data centre virtualization.(CO1,K2)	6
3-b.	Differentiate between native Virtualization and Emulation.(CO1,K4)	6
3-c.	Explain in details about Demand Driven Resource Provisioning.(CO2,K2)	6
3-d.	Discuss about the basic requirements for managing the resources of data centre.(CO2,K2)	6
3-e.	Explain benefits of moving from EC2-Classic to Amazon VPC.(CO3,K3)	6
3.f.	Explain the storage classes available in Amazon S3 in detail.(CO4,K3)	6
3.g.	Explain Infrastructure (server-side) layer also discuss its advantages and disadvantages. (CO5,K3)	6

SECTION-C   50

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

4-a.	Explain Clustering. What are virtual Cluster explain in detail.(CO1,K2)	10
4-b.	Explain Different Implementation Level Of Virtualization.(CO1,K3)	10

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

5-a.	Describe briefly the supported environments for Google App Engine.(CO2,K2)	10
5-b.	Describe four major advantages of virtualized resources in cloud computing applications.(CO2,K2)	10

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

6-a.	Briefly explain four actions to control a virtual Server in cloud virtual environment. (CO3,K2)	10
6-b.	Explain the concept of subnetting and allocating IP address in VPC. (CO3,K3)	10

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

7-a.	Differentiate between DynamoDB and RDS in detail.(CO4,K4)	10
7-b.	Explain about Amazon S3 with their key features in detail.(CO4,K3)	10

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

8-a.	Explain the process of Recovery from server failure by CloudWatch.(CO5,K3)	10
8-b.	Explain different issues and Cloud Security Challenges.(CO5,K2)	10