CLOUD COMPUTING
(INFO 4182)

Time Allotted : 3 hrs   **Full Marks : 70**

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
<u>any 5 (five)</u> from Group B to E, taking <u>at least one</u> from each group.*

Candidates are required to give answer in their own words as far as practicable.

Group – A
(Multiple Choice Type Questions)

1. Choose the correct alternative for the following: **10 × 1 = 10**

    (i)   Which of the following is a classic example of an IaaS service model?
            (a) AWS   (b) Azure
            (c) Cloudera   (d) All of the mentioned.

    (ii)   Which of the following describes a message-passing taxonomy for a component-based architecture that provides services to clients upon demand?
            (a) SOA   (b) EBS
            (c) GEC   (d) All of the mentioned.

    (iii)   In a _____ scheme, the VM is installed as a Type 1 Hypervisor directly onto the hardware.
            (a) paravirtualization   (b) full virtualization
            (c) emulation   (d) none of the mentioned.

    (iv)   An operating system running on a Type _____ VM is full virtualization.
            (a) 1   (b) 2
            (c) 3   (d) All of the mentioned.

    (v)   Which of the following allows you to create instances of the MySQL database to support your Websites?
            (a) Amazon Elastic Compute Cloud   (b) Amazon Simple Queue Service
            (c) Amazon Relational Database Service   (d) Amazon Simple Storage System.

    (vi)   Which deployment model of cloud computing is managed by a service provider, uses an infrastructure that is off-premises and is accessible to the general users?
            (a) Community Cloud   (b) Hybrid Cloud
            (c) Private Cloud   (d) Public Cloud.

(vii)   Which of the following is another name for the system virtual machine?
      (a) hardware virtual machine   (b) software virtual machine
      (c) real machine   (d) none of the mentioned.

(viii) Which of the following architectural standards is working with cloud computing industry?
      (a) Service-oriented architecture   (b) Standardized Web services
      (c) Web-application frameworks   (d) All of the mentioned.

(ix)   _____ Grid provides fault tolerant and high performance communication services.
      (a) Data   (b) Network
      (c) Collaboration   (d) None of these.

(x)   _____ Access control technique is least flexible.
      (a) Mandatory   (b) Discretionary
      (c) Role based   (d) All of these.

Group – B

2. (a)   What is Cloud Computing? Write two applications of Cloud Computing. Differentiate between Grid Computing and Cloud Computing.

(b)   Differentiate between Distributed Computing and Cluster Computing with neat diagrams

(1 + 2 + 5) + 4 = 12

3. (a)   What is Grid Computing? Explain different types of Grid used in Cloud Computing. Critically comment " Cloud Computing follows Pay as you go model"

(b)   Explain the advantages and disadvantages of Cloud Computing.

(1 + 5 + 2) + 4 = 12

Group – C

4. (a)   Explain different key properties of virtual machine.

(b)   Explain three different pricing scheme of amazon VPC.

(c)   Compare between SDN and NFV.

3 + (3 × 2) + 3 = 12

5. (a)   Explain five major actors of NIST cloud computing reference architecture.

(b)   What is full virtualization?

(5 × 2) + 2 = 12

Group – D

6. (a) Explain different types of PaaS.

    (b) What are the different APIs and services provided by Google App Engine?

    (c) Explain different use cases for PaaS.

    5 + 5 + 2 = 12

7. (a) Explain different features of Cloud SQL for MySQL of Google App Engine.

    (b) What are the different access tiers offered by Microsoft Azure storage service?

    (c) Explain different components of SOA.

    5 + 2 + 5 = 12

Group – E

8. (a) Explain one component of chargeback method.

    (b) What is SLA? Explain SLA life cycle in details.

    2 + (2 + 8) = 12

9. (a) How Life cycle management differs from Identity and Access Management?

    (b) Discuss any three types of Authentication Techniques in Cloud Computing.

    (c) Explain different types of security threats at Network Level of Infrastructure Security.

    (d) Explain the issues to be considered in Cloud Computing Contracts.

    2 + 3 + 3 + 4 = 12

Department & Section	Submission Link
ECE/EE	https://classroom.google.com/c/MTMwNjM0MzcyNTg4/a/MjY0OTA5NDc4Nz I2/details