

Integ. MSc CSF Semester-6 Examination

ICSF 308

Cloud Architecture & Security Fundamentals

Time : 2-30 Hours]

April-2024

[Max. Marks : 70]

Instructions: Illustrate your answers with neat diagrams wherever necessary.

Que 1 Write the following

- (i) Describe Compute Services in the Cloud (virtual machines, containers, serverless computing). (7 Marks)
- (ii) What are the challenges and opportunities associated with managing a Cloud (7 Marks) architecture?

OR

- (i) How does cloud computing contribute to enhancing business agility? Provide (7 Marks) examples of how businesses can benefit from adopting cloud technologies.
- (ii) Compare and contrast the compute, storage, and networking components in a cloud (7 Marks) infrastructure. How do these components work together to provide scalable and flexible services?

Que 2 Write the following

- (i) Define what a web service is in the context of cloud computing. How do web (7 Marks) services facilitate communication and interoperability within a cloud architecture?
- (ii) Enumerate five key advantages that businesses can gain by adopting cloud (7 Marks) computing. How do these benefits contribute to overall organizational success?

OR

- (i) What is DDOS Attack? How to perform DDOS Attack using cloud? Also, Explain (7 Marks) the mitigation steps.
- (ii) Explain Hijacking of Browser. Also, explain steps to deploy Beef on Wide area (7 Marks) network.

Que 3 Write the following

- (i) Identify and discuss three challenges organizations may face when adopting cloud (7 Marks) computing. How can these challenges be mitigated to ensure a smooth transition to the cloud?
- (ii) Define Cloud Computing and briefly explain its key characteristics. (7 Marks)

OR

- (i) Describe the methods for weaponizing cloud resources to hack web browsers and (7 Marks) exploit vulnerabilities.
- (ii) Explain the life cycle of Container. Also, explain the features of Container. (7 Marks)

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Que 4 Write the following

- (i) How does networking play a crucial role in ensuring seamless communication (7 Marks) within a cloud infrastructure?
- (ii) Explain the role of encryption in ensuring data security in the cloud. (7 Marks)

OR

- (i) Give difference between Docker and Micro Services. (7 Marks)
- (ii) Explain Kubernetes in detail with the features. (7 Marks)

Que 5 Attempt any seven out of twelve

(14
Marks)

- (i) Give full form of (Beef, lass, Pass, Sass)
- (ii) What are the three main types of clouds?
- (iii) Name the three cloud service models.
- (iv) What is meant by "Anywhere Access" in cloud computing?
- (v) What is S3 scanning, and how is it used for cloud security?
- (vi) Explain the concept of lazy3 in the context of cloud security.
- (vii) Name two dimensions of cloud security.
- (viii) What are the implications of data stored outside the nation's boundary?
- (ix) Explain BeeF on Cloud Instance?
- (x) Discuss the importance of compliance in cloud computing.
- (xi) Explain Apache Service.
- (xii) What is unauthenticated bucket access?