

21 MAY 2022

K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22

(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

April - May 2022

(B.Tech) Program: Information Technology

Examination: LY Semester: VIII

Course Code: 1UITDLC8022 and Course Name: Cloud Security

Duration: 03 Hours

Max. Marks: 60

Instructions:

- (1) All questions are compulsory.
- (2) Draw neat diagrams wherever applicable.
- (3) Assume suitable data, if necessary.

| | | Max. Marks | CO | BT level |
|------------|--|------------|-----|----------|
| Q 1 | Solve any six questions out of eight. | 12 | | |
| i) | Discuss cloud architecture. | 02 | CO1 | U |
| ii) | Discuss the physical environment in cloud computing. | 02 | CO2 | U |
| iii) | Explain the storage system in the cloud. | 02 | CO3 | U |
| iv) | Explain Virtual Network Functions. | 02 | CO4 | U |
| v) | Discuss data loss prevention in the cloud. | 02 | CO5 | U |
| vi) | Discuss types of Audit Reports. | 02 | CO6 | U |
| vii) | Explain Type 1 and Type 2 hypervisors in virtualization. | 02 | CO2 | U |
| viii) | Discuss Intrusion Detection system in cloud. | 02 | CO4 | U |
| Q.2 | Solve any four questions out of six. | 16 | | |
| i) | Discuss NIST model of cloud security. | 04 | CO1 | U |
| ii) | Explain Networking and networking hardware in cloud computing. | 04 | CO2 | U |
| iii) | Compare different classification techniques in the cloud. | 04 | CO3 | An |
| iv) | Demonstrate how is a Virtual Private Cloud isolated within a public cloud. | 04 | CO4 | A |
| v) | Apply AAA framework for private cloud and list advantages of AAA. | 04 | CO5 | A |
| vi) | Discuss the Assurance Challenges of Virtualization and Cloud. | 04 | CO6 | U |

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|------------|--|-----------|-----|----|
| Q.3 | Solve any two questions out of three. | 16 | | |
| i) | Discuss different components of cloud architecture with different challenges of cloud computing. | 08 | CO1 | U |
| ii) | Discuss the Countermeasure strategies for the risk associated with cloud infrastructure. | 08 | CO2 | U |
| iii) | Rima wants to apply data security in the cloud. She comes to you, as a cloud security expert, explain to her the privacy acts and how they are related to the cloud environment. | 08 | CO3 | An |
| Q.4 | Solve any two questions out of three. | 16 | | |
| i) | Implement remote dialing user authentication services by consider of financial organization. | 08 | CO4 | A |
| ii) | Apply Identity and Access Management (IAM) Solutions for "FreshHome" cloud and list different advantages. | 08 | CO5 | A |
| iii) | Discuss the legal requirements and unique risks within the cloud environment. | 08 | CO6 | U |

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