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**Presidency University**

**Bengaluru**

**School Of Computer Science and Engineering & Information Science**

**Summer term End-Term Examinations, Aug 2024**

**Date**: 08/08/2024

**Time**: 9:30am to 12:30pm

**Max Marks**: 100

**Weightage**: 50%

**Odd Semester**: 2023 - 24

**Course Code**: CSE3095

**Course Name**: Cloud Security

**Department:** SOCSE&IS

**Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Do not write any matter on the question paper other than roll number.*

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| **Q.No** | **Questions** | **Marks** | **CO** | **RBT** |
| 1 | 1. Define the term "cloud computing".List out the features and advantages of cloud computing offer. | 4 | CO1 | L1 |
| 1. Describe in detail the characteristics and applications of Community cloud. | 6 | CO1 | L2 |
| 1. Write a note on i) AWS ii) Google App Engine iii) Azure iv) Salesforce.com v) Hadoop. | 10 | CO1 | L3 |
| OR | | | | |
| 2 | a.Define autonomic security. List the different autonomic computing characteristics by IBM. | 4 | CO1 | L1 |
| b.Discuss in detail about types of cloud services with suitable diagram. | 6 | CO1 | L2 |
| c.Illustarte with an example how SPI model is different from cloud delivery model. | 10 | CO1 | L3 |

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| 3 | a.Explain the security policy implementation in detail. | 4 | CO2 | L1 |
| b.Describe Remote Access VPN with a neat diagram. | 6 | CO2 | L2 |
| c. Sketch the importance of training and exercising for CSIRT members to enhance their readiness to respond to security incidents. | 10 | CO2 | L3 |

OR

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| 4 | a.Describe the types of virtual threats with examples. | 4 | CO2 | L1 |
| b.Compare and contrast the paravirtualization and full virtualization. | 6 | CO2 | L2 |
| c.Demonstrate the virtualization security management roles with a neat diagram. | 10 | CO2 | L3 |

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| 5 | a.Differentiate between Internal and External security requirements. | 4 | CO3 | L1 |
| b.List and explain 3 primary goals of BIA along with 4 steps which are generally involved in the process of BIA. | 6 | CO3 | L2 |
| c. List out the six main attributes and 21 sub characteristics standard characterizes software quality. | 10 | CO3 | L3 |

OR

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| 6 | a.Define BCP/DRP. What are the alternative services during disasters | 4 | CO3 | L1 |
| b.Explain in detail any two ISO 9126 software quality standard measures. | 6 | CO3 | L2 |
| c. Describe any 10 NIST 33 principles and briefly explain them. | 10 | CO3 | L3 |

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| 7 | a.Define the following a)Data Lineage b)Data Provenance c) Data Remanence d) Data Mitigation. | 4 | CO4 | L1 |
| b.Describe the challenges of DOS and EDOS. | 6 | CO4 | L2 |
| c.Describe the role of firewalls and intrusion detection systems (IDS) in protecting network infrastructure. How do these tools help prevent unauthorized access and detect malicious activities. | 10 | CO4 | L3 |

OR

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| 8 | a.Define the role of antivirus and anti-malware software in protecting host systems. | 4 | CO4 | L1 |
| b.Describe strategies for mitigating Distributed Denial of Service (DDoS) attacks at the network level. | 6 | CO4 | L2 |
| c.What is a Host-Based Intrusion Detection System (HIDS), and how does it differ from network-based IDS? Describe its role in host-level security. | 10 | CO4 | L3 |

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| 9 | a.Define computing model. Show the difference between  SaaS, PaaS and IaaS with suitable example. | 4 | CO1 | L1 |
| b.Describe the major features of the Aneka Application Model with suitable sketch. | 6 | CO1 | L2 |
| c.A small business has decided to move its data and working functionalities onto the cloud. They are looking for universal accessibility data, easy data backup, and cost-efficient. They also need accounting software and customer service tools. Narrate the best suited deployment model for the considered business. | 10 | CO1 | L3 |

OR

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| 10 | a.Explain the need for interoperability and integration capabilities in cloud software. | 4 | CO2 | L1 |
| b.Describe strategies for mitigating Distributed Denial of Service (DDoS) attacks at the network level. | 6 | CO2 | L2 |
| c.Explain the concept of secure boot and firmware protection. How do these mechanisms ensure the integrity of the host system from the start-up process | 10 | CO2 | L3 |