MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
*(A constituent unit of MAHE, Manipal)*

# II SEMESTER M.TECH. (CSIS)

## GRADE IMPROVEMENT/MAKE UP EXAMINATION-Aug 2021

## SUBJECT: DISTRIBUTED AND CLOUD SECURITY (CSE 5019)
## REVISED CREDIT SYSTEM
## (25/08/2021)

Time: 2 Hours MAX.MARKS: 40

**Instructions to Candidates:**

- Answer any FOUR Full questions out of SIX questions.
- Any data missing may be suitably assumed.

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| 1A. | What is a client server architecture? What are its limitations? What challenges related to fault tolerance will appear in designing a distributed system? Explain. | 5 |
| 1B. | What is token based authentication? Explain password vulnerabilities and counter measures. | 5 |
| 2A. | What are the advantages of RBAC model? Draw a neat diagram and explain identity, credential, and access management. | 5 |
| 2B. | What is LDAP injection? Give an example and explain. How does it differ from XPath injection? What are the consequences of improper error handling? | 5 |
| 3A. | What is SSL? Explain why SSL is not suitable for web services. Explain service level attacks. | 5 |
| 3B. | What is a flooding attack? Explain the various types of flooding attacks? What are the benefits of having an incident response plan? | 5 |
| 4A. | What is an anomaly detection? Explain the types of machine-learning approaches to anomaly detection. What are the pros and cons of using these machine-learning approaches? | 5 |
| 4B. | What is the goal of autonomic computing? What are the benefits of Enterprise grid and utility computing? Mention at least 3 standard languages and protocols that support enterprise grid and utility computing. | 5 |
| 5A. | Compare and contrast different cloud deployment models. All degree colleges under UGC want to use a cloud model for uploading their curriculum, question papers etc. Which model is suitable for this purpose? Justify your answer. | 5 |

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| 5B. | Explain the different cloud security services. Assume that you are the security manager of LinkedIn company that has installed all these security services. Discuss in detail how you would use each of these services to safeguard the various operations of LinkedIn company. What is security testing? Explain. | 5 |
| 6A. | Explain the design principles that have to be applied in cloud security. | 5 |
| 6B. | Define privacy. What is the impact of privacy breach on the organizations? Explain the various types of attacks on cloud infrastructure. | 5 |

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