



R20 Regulation **Subject code: 3E7GB**
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A+' Grade)
B.Tech VII Semester Regular Examinations, November 2023

INFORMATION SECURITY
(CSE(AI&ML))

Maximum Marks: 70

Date: 12.12.2023 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

| All the following questions carry equal marks | | (10x2M=20 Marks) | Bloom Tx |
|---|---|------------------|----------|
| 1 | List the three components of the C.I.A. triad? | | L1 |
| 2 | Differentiate between vulnerability and exposure? | | L2 |
| 3 | What is privacy in an information security context? | | L1 |
| 4 | Define Law. | | L1 |
| 5 | Define risk management? | | L1 |
| 6 | What is a cost-benefit analysis? | | L1 |
| 7 | Define encryption with an example. | | L1 |
| 8 | Define resource? What are the two types? | | L1 |
| 9 | What is access control? | | L1 |
| 10 | What is a VPN? Why is it becoming more widely used? | | L1 |

Part-B

| Answer All the following questions. | | (5X10M=50Marks) | |
|-------------------------------------|--|-----------------|----|
| 11 | A. Describe the critical characteristics of information. How are they used in the study of computer security. [5] | | L2 |
| | B. What system is the predecessor of almost all modern multiuser systems? [5] | | L1 |
| OR | | | |
| 12 | What are the various types of malware? How do worms differ from viruses? Do Trojan horses carry viruses or worms? [10] | | L1 |
| 13 | A. Write in detail about legal and ethical issues in Information Security? [5] | | L2 |
| | B. What is the best method for preventing an illegal or unethical activity? [5] | | L1 |
| OR | | | |
| 14 | Briefly describe management, operational, and technical controls, and explain when each would be applied as part of a security framework. [10] | | L2 |
| 15 | Describe the defense strategy for controlling risk. List and describe the three common methods. [10] | | L2 |
| OR | | | |
| 16 | What is risk management? Why is the identification of risks and vulnerabilities to assets so important in risk management? [10] | | L1 |

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| 17 | Describe Symmetric Key Cryptography with an example. [10] | L2 |
| | OR | |
| 18 | Explain about certification and accreditation in information systems security management? List and describe at least two certification or accreditation processes. [10] | L2 |
| 19 | What is digital forensics, and when is it used in a business setting? [10] | L1 |
| | OR | |
| 20 | Describe how the various types of firewalls interact with network traffic at various levels of the OSI model. [10] | L2 |