*R20 Regulation* *Subject code: 3E7HB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

**B.Tech VII Semester Supplementary Examinations, April 2024**

**CYBER SECURITY**

CSE (DATA SCIENCE)

***Maximum Marks: 70*** Date:23.04.2024 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)

1 What is IP spoofing, and why is it a concern in cyber security?
2 Define the terms: Cyber Warfare and Cyber Crime.
3 What is the digital forensics lifecycle, and why is it important for conducting effective investigations?
4 What is Benford's Law Analysis?
5 Define the terms Smishing, Hacking.
6 List various types of mobility.
7 What is the significance of Intellectual Property Rights (IPR) issues in the context of cyber security?
8 What is SQL Injection? Give an example.
9 What is data privacy and list the elements of it?
10 Define the term: Data Linkage.

Part-B

Answer All the following questions (5X10M=50Marks)

11 A. Explain the CIA Triad in Cyber Security. How do these principles form the foundation of a secure information system (5M)
B. List the different layers of Cyber Security. (5M)

OR

12 A. Discuss the concept of risk management in cyber security. How does it help organizations make informed decisions and allocate resources effectively to mitigate threats? (6M)
B. Define the terms vulnerability, threat, and harmful acts in the context of cyber security. (4M)

13 A. Explain the significance of the National Cyber Security Policy's key objectives in the context of India's cyberspace. (6M)
B. Write short notes on forensics analysis of email. (4M)

OR

14 Examine the role of digital evidence in cyber forensics. How is digital evidence collected, preserved, and analyzed in the context of cybercrime investigations? (10M)

15 A. Analyze the prevalence of credit card frauds in the mobile and wireless computing era. (5M)
B. Write short notes on SIM Card Swapping, Network Spoofing? (5M)

OR

16 How can organizations establish comprehensive security policies to protect their data and systems in the age of mobile computing? (10M)

17 A. Examine the importance of Intellectual Property Rights (IPR) issues in the context of cyber security. (5M)
B. Discuss the psychological factors that may drive individuals to engage in cybercrimes. (5M)

OR

18 Discuss briefly about various Web Application Vulnerabilities and their mitigations in detail. (10M)

19 A. Analyze the significance of privacy policy languages in managing data privacy. (5M)
B. List various data breaches and explain any two in detail. (5M)

OR

20 Discuss briefly about various methods by which data profiling tools help accomplish better data quality. (10M)