R20 Regulation *Subject code: 3P4HB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech IV Semester Supplementary Examinations, June 2026

INFORMATION SECURITY

(CSE(DS))

Maximum Marks: 70 Date: 12.06.2026 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.
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)		Marks	CO	BTL
1	Define Information Security.	2M	1	L1
2	Categorize passive attacks?	2M	1	L1
3	Write the design parameters of feistel cipher structure.	2M	2	L1
4	Lists block cipher modes of operation.	2M	2	L1
5	Define Message Authentication.	2M	3	L1
6	Define the digital signatures.	2M	3	L1
7	List the applications of IPSEC.	2M	4	L1
8	Write the parameters identify SA.	2M	4	L1
9	Define PGP.	2M	5	L1
10	Explain S/MIME?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Discuss the network security model with neat illustration and explain the components of model.	10M	1	L2
	OR			
12	Convert "MEET ME" using Hill cipher with the key matrix $\begin{pmatrix} 17 & 17 & 5 \\ 21 & 18 & 21 \\ 2 & 2 & 19 \end{pmatrix}$ Convert the plain text back to ciphertext.	10M	1	L2
13	Explain in detail, the Diffie Hellman key exchange algorithm.	10M	2	L2
	OR			
14	Explain DES algorithm in detail with example.	10M	2	L2
15	Explain Kerberos v4 architecture in detail..	10M	3	L2
	OR			
16	Explain the message authentication codes.	10M	3	L2
17	Draw neat diagram of IP security architecture with detail description.	10M	4	L2

	OR			
18	Write about Case Studies on Cryptography and security.	10M	4	L2
19	Illustrate encapsulating security payload architecture in detail.	10M	5	L2
	OR			
20	Explain password management techniques in detail.	10M	5	L2