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ANURAG Engineering College
(An Autonomous Institution)
III B.Tech II Semester Supplementary Examinations, December-2024
NETWORK SECURITY
(COMPUTER SCIENCE AND ENGINEERING)

Time: 3 Hours **Max. Marks: 75**

Section – A (Short Answer type questions) (25 Marks)
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Explain OSI Security Architecture with neat diagram?	CO1	L2	2M
2.	List out the Security Mechanism?	CO1	L1	3M
3.	Differentiate between stream cipher and Block cipher	CO2	L3	2M
4.	Explain about avalanche effect	CO2	L2	3M
5.	Define digital signature.	CO3	L1	2M
6.	What are the various approaches to messages authentication?	CO3	L1	3M
7.	List out the functionalities of PGP?	CO4	L1	2M
8.	Draw the TLS Record Format?	CO4	L2	3M
9.	Write a short note on firewall?	CO5	L1	2M
10.	List out the categories of Intruders?	CO5	L1	3M

Section B (Essay Questions)
Answer all questions, each question carries equal marks. (5 X 10M = 50M)

				Course Outcome	B.T Level	Marks
11.	A)	Convert the following plaintext into ciphertext. Plaintext: "ANURAG ENGINEERING COLLEGE" Using Key: "SECURITY" with following methods A . mono-alphabetic substitution technique B. Playfair Cipher		CO1	L3	10M
		OR				
	B)	Explain the model for network security with neat diagram		CO1	L2	10M
12.	A)	Explain all the block cipher modes of operation with neat diagrams.		CO2	L2	10M
		OR				
	B)	Compute the public and private keys and perform the encryption and decryption of message M =9. using RSA algorithm with given p=7, q=11, e=7.		CO2	L3	10M
13.	A)	Compare different versions of SHA and Explain the SHA-512 Algorithm with neat diagram?		CO3	L2	10M
		OR				
	B)	Explain how Client/Server authentication is done using Kerberos Version-4 and Kerberos Version-5?		CO3	L2	10M
14.	A)	Explain in detail SSL protocol stack operations with neat sketches?		CO4	L2	10M
		OR				
	B)	How does PGP provide authentication and confidentiality for email services and for file transfer applications? Draw the block diagram and explain the components.		CO4	L3	10M
15.	A)	What are Firewall design principles? Explain in detail.		CO5	L2	10M
		OR				
	B)	Explain about different types of Viruses with examples		CO5	L2	10M