Question Paper Code: R18A32CS06

R18

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech II Semester Regular/Supplementary Examinations, June/July-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 security principles?	CO1	L2	2M
2.	List out the security services?	CO1	L1	3M
3.	Differentiate symmetric and asymmetric key encryption.	CO2	L3	2M
4.	Explain about Triple DES.	CO2	L2	3M
5.	Define Hash function and list out hash functions used for authentication.	CO3	L1	2M
6.	Explain digital signature.	CO3	L1	3M
7.	List the two protocols used by IPSec.	CO4	L1	2M
8.	List out the participants SET includes in online transaction.	CO4	L2	3M
9.	What is virus and list out different types of viruses.	CO5	L1	2M
10.	Explain about trusted systems?	CO5	L1	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	Ramesh is sending secret message to Ramu using Caesar cipher "MUBBSECU JE QDKHQW UDWYDUUHYDW SEBBUWU" Now analyze the above cipher text and find the plain text message and key using brute-force attack and explain the brute-force attack process.	CO1	L3	10M
	OR			
B)	Explain different types of security attacks with neat diagrams.	CO1	L2	10M
12. A)	Explain the AES algorithm and methods used in it with neat diagrams.	CO2	L2	10M
	OR			
B)	Explain Diffie-Hellman algorithm. Construct the value of YA, YB and K for user A and B. q=11, α=5, XA=7, XB =3.	CO2	L3	10M
13. A)	Explain about Whirlpool hashing and operation of W function with neat diagrams.	CO3	L2	10M
	OR			
B)	What is digital certificate and explain how X509 service is used to distribute digital certificates using X509 service certificate format.	CO3	L2	10M
14. A)	Explain in detail TLS protocol stack operations with neat sketches?	CO4	L2	10M
	OR			
B)	Analyze the Cryptographic algorithms used in S/MIME and Explain S/MIME certification processing.	CO4	L3	10M

15. A)	Explain different categories of Intruders and how Intruder detections systems will identify these intruders with neat diagram.	CO5	L2	10M
	OR			
B)	Explain different types of Firewalls with neat diagrams and list out its capabilities and limitations.	CO5	L2	10M