Department of Computer Science &Engineering (Cyber Security)

B. Tech. Mid Question Bank (R22 Regulation)

Academic Year: 2024-2025 **Semester: V**

Subject Name: Network Security and Cryptography

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PART-A

MID-I Questions					
Q.No	**Questions**	**Marks**	**BL**	**CO**	**Unit No**
1	Explain Active and Passive Attacks.	2	1	1	1
2	Define integrity and non-repudiation.	2	1	1	1
3	Define security mechanism	2	1	1	1
4	What are the principles of Security?	2	2	1	1
5	Why network need security?	2	1	1	1
6	Compare Substitution and Transposition techniques.	2	2	1	1
7	Compare stream cipher with block cipher with example.	2	1	2	2
8	List the schemes for the distribution of public keys.	2	1	2	2
9	Explain the importance of Knapsack Algorithm.	2	2	2	2
10	What is the purpose of the S-boxes in DES?.	2	1	2	2
11	Mention any one technique of Attacking RSA.	2	1	2	2
12	What is the role of session Key in public key schemes.	2	1	2	2
13	What is message authentication?	2	2	3	3
14	What you meant by hash function?	2	1	3	3
15	Distinguish between direct and arbitrated digital signature?	2	1	3	3
MID-II Questions					
16	What are the properties a digital signature should have?	2	2	3	3
17	Mention the fundamental idea of Hash Function.	2	1	3	3
18	What is the role of Compression Function in Hash Function.	2	1	3	3
19	What is TLS?	2	2	4	4
20	Define SSL.	2	1	4	4
21	List Out Web Security Considerations	2	1	4	4
22	List notations used in HTTPS?	2	1	4	4
23	Define IEEE 802.11	2	1	4	4
24	Differentiate between IEEE 802.11&802.11i	2	4	4	4
25	Define IP	2	1	5	5
26	Discuss about Internet Key Exchange?	2	2	5	5
27	Differentiate between MIME & S/MIME	2	1	5	5
28	Why is the segmentation and reassembly function in PGP needed?	2	1	5	5
29	Describe the Security Combining Associations	2	2	5	5
30	What is Encapsulating security payload?	2	1	5	5

PART-B

MID-I Questions					
Q.No	**Questions**	**Marks**	**BL**	**CO**	**Unit No**
1	Define security attack? Explain in detail about the various types of attacks for which internet work is vulnerable to.	4	1	1	1
2	Explain any three substitution techniques.	4	2	1	1
3	Distinguish strong Symmetric and Asymmetric Cryptography.	4	4	1	1
4	Explain about Transposition Techniques.	4	2	1	1
5	Define the essential ingredients of the symmetric cipher.	4	1	1	1
6	List and briefly define categories of security mechanisms.	4	1	1	1
7	Discuss about different types of various security services.	8	1	1	1
8	Explain various transposition ciphers in detail.	8	2	1	1
9	Discuss with neat sketch a network security model.	8	2	1	1
10	Define stream and block ciphers with examples.	4	2	2	2
11	Explain about AES.	4	2	2	2
12	Explain DES algorithm.	4	2	2	2
13	Explain about Blowfish.	4	1	2	2
14	Explain RSA algorithm with Suitable Example.	4	2	2	2
15	Explain Block Cipher Design Principles.	4	2	2	2
16	Discuss about Knapsack Algorithm.	8	2	2	2
17	Describe about RC4 algorithm.	8	2	2	2
18	What is Bio-metric Authentication?	8	2	2	2
19	Explain about Secure Hash Function.	4	2	2	3
20	Discuss different approaches to Message Authentication.	4	2	2	3
21	Discuss Various Digital Signatures.	4	2	3	3
MID-II Questions					
22	Explain About Secure hash Algorithm(SHA-512).	4	2	3	3
23	Explain the DSA algorithm.	4	2	3	3
24	Explain about Authentication Requirements.	4	2	3	3
25	Discuss about SSL in detail.	4	3	4	4
26	Define the steps are involved in the SSL Record Protocol transmission.	4	3	4	4
27	List and briefly define the parameters that define an SSL session session State.	4	2	4	4
28	What services are provided by the SSL Record Protocol?	4	2	4	4
29	Explain SSH in detail.	4	2	4	4
30	Explain TLS in detail.	4	2	4	4
31	Explain Services defined by IEEE 802.11 security application.	8	2	4	4
32	Discuss in detail about HTTPS.	8	3	4	4
33	Explain basic and extended Service sets In 802.11 standard.	8	3	4	4

34	How does PGP provides public Key management.	4	3	5	5
35	Explain S/MIME certificate processing method.	4	3	5	5
36	What are the key components of Internet Mail architecture?	4	3	5	5
37	What are the applications of IP Security?	4	2	5	5
38	Give IP security architecture with neat diagram.	4	2	5	5
39	Write in detail about S/MIME IP Security.	4	2	5	5
40	Explain Secure Electronic Transaction.	8	2	5	5
41	How the messages are generated and transmitted in Pretty Good Privacy(PGP). Explain with clear diagram.	8	2	5	5
42	Explain the steps involved in performing secure inter-branch payment transactions.	8	3	5	5