B.E. (Computer Technology) Eighth Semester (C.B.S.)

Cyber & Information Security

P. Pages: 2 NRT/KS/19/3679 Time: Three Hours Max. Marks: 80 All questions carry marks as indicated. Notes: 1. 2. Solve Question 1 OR Questions No. 2. Solve Question 3 OR Questions No. 4. 3. Solve Question 5 OR Questions No. 6. 4. Solve Question 7 OR Questions No. 8. 5. Solve Question 9 OR Questions No. 10. 6. Solve Question 11 OR Questions No. 12. 7. Due credit will be given to neatness and adequate dimensions. 8. Assume suitable data whenever necessary. 9. Explain the OSI Security Architecture? Define a different Security Services? 7 1. a) What is difference between Substitution Encryption techniques and Transposition b) 6 **Encryption Techniques?** OR Explain the substitution Techniques? If the cipher is keyed by a word "COMPUTER" 7 2. a) and Plaintext is "Please transfer one million dollars to my account six six two obtain the cipher text by Playfair Substitution Methods? What is cryptography? Explain the conventional Encryption model with neat diagram? b) 6 3. a) Write an algorithm for DES and analyze it? 8 Explain a block cipher principles? What is difference between stream ciphers and block b) 6 cipher? OR Explain a AES algorithm? How is different from DES algorithm? in details. 4. 8 a) Short note on. b) 6 IDEA algorithm **Key Distribution** ii) Write RSA Algorithm? Perform Encryption using the RSA Algorithm, for the following. 7 5. a) P=7, q=11, e=3, M=9 Explain the public key crypto system? What is difference between symmetric b) 6 Encryption algorithm and Asymmetric encryption algorithm. OR

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6.	a)	Explain Diffie-Hellman key Exchange algorithm with Example? IS Diffie-Hellman key Exchange Secure?	7
	b)	Describe Euclid's Algorithm with Example?	6
7.	a)	What is message Authentication? And what are the requirements of message authentication?	7
	b)	Explain the Digital Signatures and properties of Digital signatures in detail?	6
		OR	
8.	a)	Differentiate Authentication and Digital Signature?	6
	b)	Explain a Hash function and their security?	7
9.	a)	Explain a firewall? and what are the different types of firewalls?	8
	b)	Explain a viruses and list down any three recent highly spreading viruses?	5
		OR	
10.	a)	Explain the following terms-i) Trap doors and cross site scripting.ii) Host based v/s Network based IDS	7
	b)	What is Intruder? Explain Intrusion Techniques?	6
11.	a)	What is S/MIME? What are function it provides?	7
	b)	Explain Secure Electronic Transaction in detail.	7
		OR	
12.		Short Note on any three. a) PGP b) SQL injection. d) Chip Card Transaction.	14
