

M.E. First Semester (Electronics & Telc.) (Full Time) (C.G.S. - New)
13338 : Elective - I : Cryptography & Network Security : 1 ENTC 5

P. Pages : 2

Time : Three Hours



AU - 3464

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
 2. Due credit will be given to neatness and adequate Dimensions.
 3. Assume suitable data wherever necessary.
 4. Use of pen Blue/Black ink/refill only for writing book.

1. Encrypt the message "Meet me at the usual place at ten rather than eight O' clock using Hill cipher with the by $\begin{bmatrix} 9 & 4 \\ 5 & 7 \end{bmatrix}$. 13
Show your calculations and results. Similarly, show the calculations for corresponding decryption of the cipher text to recover the original plain text.

OR

2. a) Briefly explain Diffie Hellman key exchange algorithm with example. 7
b) What are essential ingredients of a symmetric cipher? Explain. 6
3. Given two prime numbers $P = 7$ and $Q = 17$ specify the public key and private key use these keys to encrypt the plain text "10" using RSA algorithm. Also develop the corresponding algorithm. 13

OR

4. a) Explain the key generation, encryption & decryption of SDES algorithm in detail. 7
b) Explain the various rounds used in RC5 encryption method. 6
5. Explain MD5 message digest algorithm with its logic & compression function. 14

OR

6. a) What are the requirements of message digest? Explain the idea of message digest with an example. 7
b) Explain HMAC with example. 7
7. a) Explain the IP security architecture. What are the parameters by which the security association is defined in a SAD entry. 7
b) What do you mean by PGP? Explain it in detail. 7

OR

8. Explain X-509 authentication service & it's certificate. 14

9. a) Write down the four generations of antivirus software. 7
b) Explain the following 6
i) Malicious Software
ii) Screened Host firewall configuration.

OR

10. a) Explain firewall design principles characteristics and types of firewall. 7
b) Explain the numerous viruses need to be encountered. 6
11. a) Explain issues in web security. 6
b) Comment on password selection strategies & their significance. 7

OR

12. a) Differentiate spyware & Virus 7
b) Describe the transport & tunnel mode of encapsulating security payload. 6

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