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P. Pages : 2

Time : Three Hours

**NIR/KW/18/3691**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.

1. a) Explain different issues of information security in brief. 7  
b) Explain different security services with example. 7

**OR**

2. a) Draw and explain internetwork security model. 7  
b) Encrypt following statement using  
i) railfence technique and 3  
ii) 2-Columnar technique 4  
"Hardwork makes a man perfect".

3. a) Explain centralized key distribution technique. 6  
b) Explain DES algorithm in brief. 8

**OR**

4. a) Explain Different block cipher modes of operation in detail. 9  
b) Explain IDEA algorithm. 5
5. a) Write R.S.A. Algorithm. Also perform encryption and decryption using RSA for following values  $P = 5$ ,  $q = 11$ ,  $e = 3$  &  $M = 9$ . 8  
b) Write diffie-Hellman key exchange algorithm. 5

**OR**

6. a) What are the different key generation techniques? Explain any one in brief. 6  
b) Explain elliptic curve cryptography. 7

7. a) What is Hash function? Explain MD-5 algorithm. 7  
b) What are the different type of digital certificates? 6

**OR**

8. a) Explain Kerberos version-4 with its dialogue in detail. 8  
b) Explain PKI architecture in brief. 5  
9. a) Draw SSL stack and explain Handshake protocol in brief. 7  
b) Explain transport layer security. 6

**OR**

10. a) Draw and explain IPSEC model. 7  
b) Differentiate between Tunnel and transport mode of security. 6  
11. a) Write a note on 13  
i) Phishing ii) Cross site scripting  
iii) SQL injection iv) Buffer overflow

**OR**

12. a) Explain in detail pretty good privacy. 7  
b) What is secure electronic transaction? How does it work? 6

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~ Walt Disney

