NagpurStudents

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> **IT'S HARD TO BEAT A PERSON WHO NEVER GIVES UP.**
>
> Babe Ruth, American professional baseball player

B.E. (Computer Science & Engineering) Eighth Semester (C.B.S.)
Information & Cyber Security

P. Pages : 2

Time : Three Hours

NRJ/KW/17/4747

Max. Marks : 80

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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.
  8. Due credit will be given to neatness.
  9. Assume suitable data whenever necessary.
  10. Diagrams should be given whenever necessary.
  11. Illustrate your answers whenever necessary with the help of neat sketches.
  12. Use of non programmable calculator is permitted.

1. a) What do you mean by network security? Explain services provided by network security in detail. **7**

   b) Explain Monoalphabetic cipher in detail & generate cipher text for "GOOD MORNING" using it. **7**

OR

2. a) Explain network security Model in detail with diagram. **7**

   b) Using play for cipher, encrypt the following sting "Playfair Cipher" using key "Marshall". **7**

3. Explain in Detail IDEA Algo. with key generation process in detail. **14**

OR

4. What is DES, Triple DES & SDES? Explain DES Algo in detail with key generation & also explain Triple DES with diagram. **14**

5. a) Perform, encryption using RSA Algorithm. for given data P=07 ; q=17; Plain Text : 10 Also write Algo steps **7**

   b) Generate key K1 & K2 for Alice & Bob using Diffie-Hellman key exchange Also. for $n = 11; g = 7; x = 3 \& y = 6$. **6**

OR

6. a) What WOMAN-IN-MIDDLE Attack does? Explain WOMAN IN MIDDLE attack in detail. **6**

   b) Explain Elliptic curve cryptography in detail. **7**

7. a) Explain kerberos authentication protocol in detail. **7**

b) Explain X.509 certification revocation mechanism & format in brief. **6**

OR

8. a) What is digest? Explain Message Digest 5 in detail. **7**

b) Explain hash function in detail. **6**

9. a) What are the services provided by IPsec? Explain in detail. **7**

b) Explain IPsec ESP & AH. in detail. **6**

OR

10. a) Explain transport layer security & SSL/TSL in detail. **7**

b) What is Firewall? Explain it with advantages. **6**

11. a) Write note on: **13**
   a) PGP   b) S/MIME

OR

12. a) Explain in detail SET (secure electronic transaction). **7**

b) Explain online Ticket Booking System. **6**

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High expectations are the key to everything.

~ Sam Walton

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