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

Cyber & Information Security

P. Pages : 2 **TKN/KS/16/7682**

Time : Three Hours * 0 4 3 6 * 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.
8. Due credit will be given to neatness and adequate dimensions.

1. a) State the different substitution encryption techniques. **8**
Encrypt the following plaintext using playfair cipher:
Plaintext $\rightarrow$WILLIAMSTALLING.
Keyword $\rightarrow$ CTECH

b) Explain different security services. **6**

OR

2. a) Explain the model of network security and access security model. **7**

b) What are the ethical and professional issues related to information security. **7**

3. a) Explain international data encryption Algorithm in detail and list out all the encryption and decryption subkeys in detail. **13**

OR

4. a) What are the block cipher modes of operation explain them in brief. **9**

b) Explain Decentralized key distribution scenario. **4**

5. a) Describe Euclid's Algorithm with example. **7**

b) Write a note on Chinese Remainder Theorem. **6**

OR

6. a) Write RSA algorithm. Explain its implementation and security. **6**

b) In public key system using RSA you intercept the ciphertext C = 10 sent to the user whose public key is e = 5, n = 35, what is the plaintext M? **7**

7. a) Explain Authentication functions and Authentical requirements. **8**

b) Write a note on Hash function. **5**

OR

8. Explain kerberos is detail. **13**

9. a) What is firewall? What are its characteristics? List the design goals, for a firewall. **6**

b) What is intruder? Explain intrusion techniques. **5**

c) List down any three recent highly spreading viruses. **3**

OR

10. a) Explain different types of Firewalls. **6**

b) Explain honeypot system of intrusion detection. **4**

c) Explain the terms "Back door" and "Trogon horse". **4**

11. a) Explain pretty good privacy in detail. **13**

OR

12. Write a brief note on.

a) SET **5**

b) Cross-site scripting. **4**

c) Chip-card Transaction. **4**

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