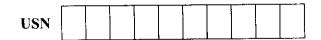
(10 Marks)



Eighth Semester B.E. Degree Examination, June / July 2014 **Network Security**

Max. Marks: 100 Time: 3 hrs.

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART - A

- (04 Marks) Distinguish between passive and active attacks. (06 Marks) Explain the different categories of security services. b.
 - Draw the block diagram of network security model and explain it. Mention basic tasks in (10 Marks) designing a particular security service.
- Encrypt the plain text "PAY MORE MONEY" using Hill Cipher with the key.

$$Key = \begin{bmatrix} 17 & 17 & 5 \\ 21 & 18 & 21 \\ 2 & 2 & 19 \end{bmatrix}$$

Show the calculations and cipher text.

- Draw the single round DES algorithm and explain the process in detail. (10 Marks)
- In a RSA algorithm system it is given that p = 3, q = 11, e = 7 and M = 5. Find the cipher (06 Marks) text 'C' and decrypt 'C' to get plaintext M.
 - (06 Marks) Explain Diffie-Hellman key exchange algorithm with example.
 - What is key management? Explain distribution of secret key using public key cryptography. (08 Marks)
- (08 Marks) Explain arbitrated digital signatures technique. a.
 - (08 Marks) With neat diagram, explain digital signature algorithm.
 - (04 Marks) Illustrate replay attacks.

PART – B

- Draw the block diagram of handshake protocol action and explain it. (08 Marks) a.
 - ii) Payment authorization transaction supported Explain in detail: i) Purchase request b. (08 Marks) by Secure Electronic Transaction (SET).
 - (04 Marks) List the features of secure socket layer. c.
- What are the different types of intrusion detection system and explain it? (10 Marks) a.
 - (04 Marks) Mention the advantages and disadvantages of signature-based detection. b.
 - (06 Marks) Explain the password selection strategies. c.
- (08 Marks) Briefly describe the types of viruses. a.
 - (08 Marks) With a neat diagram, explain digitial immune system. b.
 - (04 Marks) Difference between worm and virus. c.
- What are the different types of firewall and explain packet filtering router in detail? 8 a.
 - (10 Marks) b. What are the different firewall configurations and explain it? (10 Marks)