MID SEM EXAM OF NETWORK SECURITY

SECTION A: /10 marks (Attempt all of questions in this section)

1. What are three main goals of network security? **(3 marks)**

2. Differentiate symmetric from asymmetric cryptography. **(2 marks)**

3. Differentiate authorization from authentication with example. **(3 marks)**

4. Give and explain two types of passive network security attacks. **(2 marks)**

SECTION B /10 marks (Attempt all of questions in this section)

Complete the table below

	Hill cipher technique	Play-fair technique	Caser cipher algorithm
key	6 5 1 3 2 3 4 3 2	Monarchy	6
Plain text	? **(4 marks)**	**?** **(3 marks)**	? **(3 marks)**
Cipher text	KRRUIABNUBOHMLF	SBAEOIMNXFYQ	XANKTMKXO

SECTION C /10 Marks:

Choose two questions from this section: Each question is marked out 5 Marks

1. Given the message ''**I WILL VISIT YOU NEXT YEAR IN OCTOBER**'' and the key **32541;** use row transposition algorithm to transform the above plain text into a cipher text. **(5 marks).**

2. By using additive cipher technique with the key k=4 ,encrypt the following words **(5 marks)**

    i.   BOAT **(1 marks)**
    ii.   BOOK **(1 marks)**
    iii. COOK **(1 marks)**
    iv.   ZOOK **(1 marks)**
    v.   COST **(1 marks)**

3. Explain four types of active attacks as related to network security. **(5 marks)**