

### Set 1 :

1. Find  $n$ ,  $\phi(n)$ ,  $e$ ,  $d$  for  $p=7$  and  $q=19$  then demonstrate encryption and decryption for  $M = 6$
2.  $q=23$ ,  $\alpha=9$ ,  $X_a=4$ ,  $X_b=3$  determine public key and shared key for both users using hellman key exchange algorithm.
3. Encrypt and Decrypt "Surgical strike" message using caesar cipher with key 3.

### Set 2:

1. Find  $n$ ,  $\phi(n)$ ,  $e$ ,  $d$  for  $p=11$  and  $q=13$  then demonstrate encryption and decryption for  $M = 9$
2.  $q=11$ ,  $\alpha=2$ ,  $X_a=8$ ,  $X_b=6$  determine public key and shared key for both users using hellman key exchange algorithm.
3. Encrypt "meet me after the meeting" message using Rail fence technique with key 3.

### Set 3:

1. Find  $n$ ,  $\phi(n)$ ,  $e$ ,  $d$  for  $p=17$  and  $q=31$  then demonstrate encryption and decryption for  $M = 5$
2.  $q=13$ ,  $\alpha=6$ ,  $X_a=5$ ,  $X_b=2$  determine public key and shared key for both users using hellman key exchange algorithm.
3. Encrypt and Decrypt "Darshan university" message using caesar cipher with key 3.

#### **Set 4:**

1. Find  $n$ ,  $\phi(n)$ ,  $e$ ,  $d$  for  $p=7$  and  $q=11$  then demonstrate encryption and decryption for  $M = 6$
2.  $q=23$ ,  $\alpha=5$ ,  $X_a=6$ ,  $X_b=15$  determine public key and shared key for both users using hellman key exchange algorithm.
3. Encrypt " darshan university is the best" message using Rail fence technique with key 2.

#### **Set 5:**

1. Find  $n$ ,  $\phi(n)$ ,  $e$ ,  $d$  for  $p=7$  and  $q=17$  then demonstrate encryption and decryption for  $M = 5$
2.  $q=19$ ,  $\alpha=10$ ,  $X_a=7$ ,  $X_b=8$  determine public key and shared key for both users using hellman key exchange algorithm.
3. Encrypt and Decrypt "Test this process" message using caesar cipher with key 3.