CSE, MNIT Jaipur 2020-21
Advanced Cryptography(CST-701) M-Tech, I Sem
Time:15 Min (11/11/2020) Total Marks: 20

Mid Term Examination, Part-II

1 [**3+2 points**] Suppose we create an affine cipher which includes a = 0, b = 1, . . . , z = 25, ? = 26, ;=27, ” = 28, ! = 29. So our encryption function will be now (α x + β (mod 30))

(a) How many possible values for α is there?

(b) Suppose one of the value for these symbols is: α =10 and β =0. Identify 2 plaintext letters which gives same ciphertext for these values.

2 [**5 points**] Solve the followings:-

(a) Find the multiplicative inverse of (24140 mod 40902) using EEA.

3 [**5 points**] Explain the pillars of Modern cryptography and their need?

4 [**5 points**]

Suppose the ciphertext: ZICVTWQNGRZGVTWAVZHCQYGLMGJ is generated using Viegenre Cipher. Find out the key length. Describe the method used by you.