

Name:

ID:

Answer the following Questions[15 marks]

Question 1:

Generate the new key matrix from the following matrix

3A	15	36	2C
4B	17	26	54
29	1B	22	34
1F	CE	15	4D

Question 2:

Apply the RSA algorithm to encrypt $M=50$ using $p=5$ and $q=11$.

Question 3:

Evaluate $50^{21} \bmod 113$ using the binary method.