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Lab 10 Security

Q1: Playfair Cipher: "BALLON"

- Break the word into pairs: BA – LX – ON

- BA: JB

- LX: SU

- ON: NA

- Final Word: *JBSUNA*

Q2: Ceaser Cipher "Attack" with key "4"

Plain Text	Alphabet Index	Shifted +4	Ciphertext
A	0	4	E
T	19	23	X
T	19	23	X
A	0	4	E
C	2	6	G
K	10	14	O

- Final Word: *EXXEGO*

Q3: Monoalphabetic Cipher "Mosque" with key "Yasmin"

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Y A S M I N B C D E F G H J K L O P Q R T U   V W X Z

- Final Word: *HKQOTI*

Q4: Vigenère Cipher "Congratulations" with key "Nada"

- Plain Text: C O N G R A T U L A T I O N S

- Key: N A D A N A D A N A D A N A D

Plain	Key	P Index	K Index	(P + K) mod 26	Cipher
C	N	2	13	15	P
O	A	14	0	14	O
N	D	13	3	16	Q
G	A	6	0	6	G
R	N	17	13	4	E
A	A	0	0	0	A
T	D	19	3	22	W
U	A	20	0	20	U
L	N	11	13	24	Y
A	A	0	0	0	A
T	D	19	3	22	W
I	A	8	0	8	I
O	N	14	13	1	B
N	A	13	0	13	N
S	D	18	3	21	V

- Final Word: *POQGEAWUYAWIBNV*

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Question 5: Rail Fence Cipher "Cryptography" with depth "3"

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C       T           A
  R   P     O   R   P   Y
    Y         G       H
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- Final Word: CTARPORPYYGH

Question 6: Columnar Cipher Encryption "Entrepreneurship" with key "5 2 1 4 3"

5	2	1	4	3
E	N	T	R	E
P	R	E	N	E
U	R	S	H	I
P	X	X	X	X

Final Word: TESXNRRXEEIXRNHXEPUP