

3 Playfair Code (Max 10pts)

- 3.1 Construct a Playfair matrix with the key LARGEST. (2pts)
 3.2 Construct a Playfair matrix with the key OCCURRENCE. (2pts)
 3.3 Encrypt message: "MUST SEE YOU OVER CADOGAN WEST. COMING AT ONCE." Using following Playfair matrix: (2pts)

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

- 3.4 Encrypt message: "Must see you over Cadogan West. Coming at once." Using Playfair matrix from 3.1. (2pts)
 3.5 Compare encrypted messages of 3.3 and 3.4. Why did it happen? (2pts)

3)

Playfair matrix with the key: LARGEST

3.1

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

Playfair matrix with the key: OCCURRENCE

3.2

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

3.3

Plaintext MUST SEE YOU OVER CADOGAN WEST. COMING AT ONCE.
 Plaintext pairs MU ST SE EX YO UX OV ER CA DO GA NX WE ST CO MI NG AT ON CE
 Encrypted UZ TB DL RZ WQ PZ NW LG TG TU ER PV ZA TB TQ FK QL TH PO DG

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

3.4

Plaintext MUST SEE YOU OVER CADOGAN WEST. COMING AT ONCE.
 Plaintext pairs MU ST SE EX YO UX OV ER CA DO GA NX WE ST CO MI NG AT ON CE

Encrypted

UZ TB DL RZ WQ PZ NW LG TG TU ER PV ZA TB TQ FK QL TH PO DG

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

3.5

3.3 Encrypted message:

3.4 Encrypted message:

Messages are the same since both key matrixes have the same letters and the letters have the same relations to each other in both matrixes

