

Date Page Polyalphabetic (Vigenere)

Encrypt the following message using polyalphabetic cipher

① plain text :- CROWN MORE TREE
Key :- CTOOD

Soln:-

plain text :- CROWN MORE TREE
Key :- CTOOD CTOOD CTOOD

⇒

0	1	2	3	4	5	6	7	8	9	20
A	B	C	D	E	F	G	H	I	J	K
11	12	13	14	15	16	17	18	19	20	21
L	M	N	O	P	Q	R	S	T	U	V
22	23	24	25							
W	X	Y	Z							

Key	6	14	14	3	6	14	14	3
PT	6	17	14	22	12	14	17	4
CT	12	5	2	25	18	2	5	7
Key	6	14	14	3				
PT	19	17	4	4				
CT	25	5	18	7				

$$C_i = (P_i + K_i \text{ mod } m) \text{ mod } 26$$

Plaintext:- GROW MORE TREE

Ciphertext:- MFCZS FHZFSH

② Plaintext:- deceptive

Key:- wireless

Key	22	8	17	4	11	4	18	18	22
PT	3	4	2	4	15	19	8	21	4
CT	25	12	19	8	0	23	0	13	0

$$C_i = (P_i + K_i \text{ mod } m) \text{ mod } 26$$

Plaintext:- deceptive

Ciphertext:- ZMTIAXANA

③ Plaintext:- JAVATPOINT

Key:- BEST

→ JAVATPOINT

→ BESTBESTBE

KEY	9	4	18	19	1	4	18	19	1	4
PT	9	0	21	0	19	15	14	8	13	19
CT	10	4	13	19	20	19	20	1	14	23

Plaintext:- JAVATPOINT

Ciphertext:- KENTUTUBOX

④

plaintext: hello
key: abc

→ h e l l o → plaintext
a b c a b → key

key	0	1	2	0	1
PT	7	4	11	11	14
CT	7	5	13	11	15

plaintext: hello
ciphertext: hFNLP

⑤

plaintext: THE BOY HAS THE BAOT
key: VIOT

→ THE BOY HAS THE BAOT
VIOT VIOT VIOT VIOT VIOT

Key	21	8	6	21	8	6	21	8	6	21	8	6
PT	19	7	4	1	14	24	7	0	18	19	7	4
CT	24	15	10	22	22	4	7	8	24	14	15	10

21	8	6
2	0	6
23	8	12

plaintext: THE BOY HAS THE BAOT
ciphertext: OPR WNE BLY OPR XIM