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 Plug : IF – B (Kriptografi)

Tugas 3

1. Vigenere Chiper

Plaintext : BELAJAR KRIPTOGRAFI UNTUK INDONESIA MERDEKA

Kata kunci : INFORMATIKA

Plainteks	B	E	L	A	J	A	R	K	R	I	P	T	O	G	R	A	F	I	U	N
	1	4	11	0	9	0	17	10	17	8	15	19	14	6	17	0	5	8	20	13
Kunci	I	N	F	O	R	M	A	T	I	K	A	I	N	F	O	R	M	A	T	I
	8	13	5	14	17	12	0	19	8	10	0	8	13	5	14	17	12	0	19	8
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Plainteks	T	U	K	I	N	D	O	N	E	S	I	A	M	E	R	D	E	K	A
	19	20	10	8	13	3	14	13	4	18	8	0	12	4	17	3	4	10	0
Kunci	K	A	I	N	F	O	R	M	A	T	I	K	A	I	N	F	O	R	M
	10	0	8	13	5	14	17	12	0	19	8	10	0	8	13	5	14	17	12
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39

1. $(B + I) \bmod 26 = (1 + 8) \bmod 26 = 9 \rightarrow J$
2. $(E + N) \bmod 26 = (4 + 13) \bmod 26 = 17 \rightarrow R$
3. $(L + F) \bmod 26 = (11 + 5) \bmod 26 = 16 \rightarrow Q$
4. $(A + O) \bmod 26 = (0 + 14) \bmod 26 = 14 \rightarrow O$
5. $(J + R) \bmod 26 = (9 + 17) \bmod 26 = 0 \rightarrow A$
6. $(A + M) \bmod 26 = (0 + 12) \bmod 26 = 12 \rightarrow M$
7. $(R + A) \bmod 26 = (17 + 0) \bmod 26 = 17 \rightarrow R$
8. $(K + T) \bmod 26 = (10 + 19) \bmod 26 = 3 \rightarrow D$
9. $(R + I) \bmod 26 = (17 + 8) \bmod 26 = 25 \rightarrow Z$
10. $(I + K) \bmod 26 = (8 + 10) \bmod 26 = 18 \rightarrow S$
11. $(P + A) \bmod 26 = (15 + 0) \bmod 26 = 15 \rightarrow P$
12. $(T + I) \bmod 26 = (19 + 8) \bmod 26 = 1 \rightarrow B$
13. $(O + N) \bmod 26 = (14 + 13) \bmod 26 = 1 \rightarrow B$
14. $(G + F) \bmod 26 = (6 + 5) \bmod 26 = 11 \rightarrow L$
15. $(R + O) \bmod 26 = (17 + 14) \bmod 26 = 5 \rightarrow F$
16. $(A + R) \bmod 26 = (0 + 17) \bmod 26 = 17 \rightarrow R$
17. $(F + M) \bmod 26 = (5 + 12) \bmod 26 = 17 \rightarrow R$
18. $(I + A) \bmod 26 = (8 + 0) \bmod 26 = 8 \rightarrow I$
19. $(U + T) \bmod 26 = (20 + 19) \bmod 26 = 13 \rightarrow N$
20. $(N + I) \bmod 26 = (13 + 8) \bmod 26 = 21 \rightarrow V$
21. $(T + K) \bmod 26 = (19 + 10) \bmod 26 = 3 \rightarrow D$
22. $(U + A) \bmod 26 = (20 + 0) \bmod 26 = 20 \rightarrow U$
23. $(K + I) \bmod 26 = (10 + 8) \bmod 26 = 18 \rightarrow S$

24. $(I + N) \bmod 26 = (8 + 13) \bmod 26 = 21 \rightarrow V$
25. $(N + F) \bmod 26 = (13 + 5) \bmod 26 = 18 \rightarrow S$
26. $(D + O) \bmod 26 = (3 + 14) \bmod 26 = 17 \rightarrow R$
27. $(O + R) \bmod 26 = (14 + 17) \bmod 26 = 5 \rightarrow F$
28. $(N + M) \bmod 26 = (13 + 12) \bmod 26 = 25 \rightarrow Z$
29. $(E + A) \bmod 26 = (4 + 0) \bmod 26 = 4 \rightarrow E$
30. $(S + T) \bmod 26 = (18 + 19) \bmod 26 = 11 \rightarrow L$
31. $(I + I) \bmod 26 = (8 + 8) \bmod 26 = 16 \rightarrow Q$
32. $(A + K) \bmod 26 = (0 + 10) \bmod 26 = 10 \rightarrow K$
33. $(M + A) \bmod 26 = (12 + 0) \bmod 26 = 12 \rightarrow M$
34. $(E + I) \bmod 26 = (4 + 8) \bmod 26 = 12 \rightarrow M$
35. $(R + N) \bmod 26 = (17 + 13) \bmod 26 = 4 \rightarrow E$
36. $(D + F) \bmod 26 = (3 + 5) \bmod 26 = 8 \rightarrow I$
37. $(E + O) \bmod 26 = (4 + 14) \bmod 26 = 18 \rightarrow S$
38. $(K + R) \bmod 26 = (10 + 17) \bmod 26 = 1 \rightarrow B$
39. $(A + M) \bmod 26 = (0 + 12) \bmod 26 = 12 \rightarrow M$

Chipperteks : JRQOAMR DZSPBBLFRRI NVDUS VSRFZELQK MMEISBM

2. Caesar Chiper & Scytale Chiper

Kunci : 5

Chippertext : **NJNSXYINFTFESPE**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

S	T	U	V	W	X	Y	Z
18	19	20	21	22	23	24	25

- Caesar Chiper

Rumus : $p_i = (c_i - k) \bmod 26$

$$P_1 = (13 - 5) \bmod 26 = 8 \rightarrow I$$

$$P_2 = (9 - 5) \bmod 26 = 4 \rightarrow E$$

$$P_3 = (13 - 5) \bmod 26 = 8 \rightarrow I$$

$$P_4 = (18 - 5) \bmod 26 = 13 \rightarrow N$$

$$P_5 = (23 - 5) \bmod 26 = 18 \rightarrow S$$

$$P_6 = (24 - 5) \bmod 26 = 19 \rightarrow T$$

$$P_7 = (8 - 5) \bmod 26 = 3 \rightarrow D$$

$$P_8 = (13 - 5) \bmod 26 = 8 \rightarrow I$$

$$P_9 = (5 - 5) \bmod 26 = 0 \rightarrow A$$

$$P_{10} = (19 - 5) \bmod 26 = 14 \rightarrow O$$

$$P_{11} = (5 - 5) \bmod 26 = 0 \rightarrow A$$

$$P_{12} = (4 - 5) \bmod 26 = 25 \rightarrow Z$$

$$P_{13} = (18 - 5) \bmod 26 = 13 \rightarrow N$$

$$P_{14} = (15 - 5) \bmod 26 = 10 \rightarrow K$$

$$P_{15} = (4 - 5) \bmod 26 = 25 \rightarrow Z$$

- Scytale Chiper

I	N	D	O	N
E	S	I	A	K
I	T	A	Z	Z

Plaintext : INDONESIAZZ