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DATE :

1. a) Fortran \rightarrow 5 14 17 19 17 0 13, $k = 20$

$$F = (5 + 20) \bmod 26 = 25 \text{ (Z)} \quad \text{": hasil enkripsi}$$

$$O = (14 + 20) \bmod 26 = 8 \text{ (I)} \quad \text{"ZILNLUH"}$$

$$R = (17 + 20) \bmod 26 = 11 \text{ (L)}$$

$$T = (19 + 20) \bmod 26 = 13 \text{ (N)}$$

$$R = (17 + 20) \bmod 26 = 11 \text{ (L)}$$

$$A = (0 + 20) \bmod 26 = 20 \text{ (U)}$$

$$N = (13 + 20) \bmod 26 = 7 \text{ (H)}$$

b) ZGXEDZJN \rightarrow 25 6 23 4 8 3 25 9 13, $k = 15$

$$Z = (25 - 15) \bmod 26 = 10 \text{ (K)}$$

$$G = (6 - 15) \bmod 26 = 17 \text{ (R)}$$

$$X = (23 - 15) \bmod 26 = 8 \text{ (I)}$$

$$E = (4 - 15) \bmod 26 = 15 \text{ (P)}$$

$$D = (3 - 15) \bmod 26 = 14 \text{ (O)}$$

$$Z = (25 - 15) \bmod 26 = 10 \text{ (K)}$$

$$J = (9 - 15) \bmod 26 = 20 \text{ (U)}$$

$$N = (13 - 15) \bmod 26 = 24 \text{ (Y)}$$

2	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

TN ZCNAT XNA \rightarrow GAMPANGKAN

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1 teks: Saya mahasiswa Unpad, misal nilai $a = 7$ dan $b = 10$
 18 0 24 0 12 0 7 0 18 8 18 22 0 20 13 15 0 3
 $E(x) = (ax+b) \bmod 26$
 $S = (7(18)+10) \bmod 26 = 6$
 $a = (7(0)+10) \bmod 26 = 10$
 $y = (7(24)+10) \bmod 26 = 22$
 $a = (7(0)+10) \bmod 26 = 10$
 $m = (7(12)+10) \bmod 26 = 16$
 $a = (7(0)+10) \bmod 26 = 10$
 $h = (7(7)+10) \bmod 26 = 7$
 $a = (7(0)+10) \bmod 26 = 10$
 $s = (7(18)+10) \bmod 26 = 6$
 $i = (7(8)+10) \bmod 26 = 14$
 $s = (7(18)+10) \bmod 26 = 6$
 $w = (7(22)+10) \bmod 26 = 8$
 $a = (7(0)+10) \bmod 26 = 10$
 $u = 7(20)+10 \bmod 26 = 20$
 $n = 7(13)+10 \bmod 26 = 23$
 $p = 7(15)+10 \bmod 26 = 11$
 $a = 7(0)+10 \bmod 26 = 10$
 $d = 7(3)+10 \bmod 26 = 5$

chipper text = GKWK QKHKGOLK UXLKF

$\text{GCD}(7, 26)$

$$26 = 7 \cdot 3 + 5$$

$$7 = 5 \cdot 1 + 2$$

$$5 = 2 \cdot 2 + 1$$

$$2 = 2 \cdot 1 + 0$$

$$t_0 = 0 \quad t_1 = 1 \quad q_1 = 3, q_2 = 1, q_3 = 2$$

$$t_2 = (t_0 - (q_1 \cdot t_1)) \bmod 26$$

$$(0 - (3 \cdot 1)) \bmod 26 = 23$$

$$t_3 = (t_1 - (q_2 \cdot t_2)) \bmod 26$$

$$(1 - (1 \cdot 23)) \bmod 26 = 4$$

$$t_4 = (t_2 - (q_3 \cdot t_3)) \bmod 26$$

$$(23 - (2 \cdot 4)) \bmod 26 = 15$$

$$a^{-1} = 15$$

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Notes :

$$D(y) = a^{-1} (y - b) \bmod 26$$

$$G = 15 (6 - 10) \bmod 26 = 18$$

$$K = 15 (10 - 10) \bmod 26 = 0$$

$$W = 15 (22 - 10) \bmod 26 = 24$$

$$K = 15 (10 - 10) \bmod 26 = 0$$

$$Q = 15 (16 - 10) \bmod 26 = 12$$

$$K = 15 (10 - 10) \bmod 26 = 0$$

$$H = 15 (7 - 10) \bmod 26 = 7$$

$$K = 15 (10 - 10) \bmod 26 = 0$$

$$G = 15 (6 - 10) \bmod 26 = 18$$

$$O = 15 (14 - 10) \bmod 26 = 8$$

$$G = 15 (6 - 10) \bmod 26 = 18$$

$$I = 15 (8 - 10) \bmod 26 = 22$$

$$K = 15 (10 - 10) \bmod 26 = 0$$

$$U = 15 (20 - 10) \bmod 26 = 20$$

$$X = 15 (23 - 10) \bmod 26 = 13$$

$$L = 15 (11 - 10) \bmod 26 = 15$$

$$K = 15 (10 - 10) \bmod 26 = 0$$

$$F = 15 (5 - 10) \bmod 26 = 3$$

Plain text : Saya mahasiswa Unpad