

Encrypted text to work with at the end of Module-II

Hint!

- It is a permutation cipher
- 'a' has been permuted to 'z', so you need to map z → a to get the plain text back

g s v h g i f x g f i v z m w l k v i z g r l m l u g s v v b v r h
 e v i b h r n r o z i g l z m v o v x g i l m r x x z n v i z , z m w r g
 r h m z g f i z o g l w r h x f h h g s v n g l t v g s v i . y l g s
 z i v y z h v w l m g d l n z q l i x l n k l m v m g h : z o v m h
 z h h v n y o b , z m w z m r n z t r m t h v m h l i . g s v o v m h
 z h h v n y o b x z k g f i v h z k l i g r l m l u g s v o r t s g
 v n z m z g r m t u i l n z m l y q v x g , z m w u l x f h r g
 l m g l g s v r n z t r m t h v m h l i . g s v r n z t r m t h v m h l i
 g s v m g i z m h u l i n h g s v k z g g v i m l u o r t s g r m g l z
 r w v l h r t m z o , v r g s v i v o v x g i l m r x l i m v f i z o .

In Cipher	to	In Plain
a	to	
b	to	
c	to	
d	to	
e	to	
f	to	
g	to	
h	to	
i	to	
j	to	
k	to	
l	to	
m	to	

In Cipher	to	In Plain
n	to	
o	to	
p	to	
q	to	
r	to	
s	to	
t	to	
u	to	
v	to	
w	to	
x	to	
y	to	
z	to	a

Part of the EASCII table

<u>Binary</u>	<u>Value</u>
00100000	SP (Space)
00100001	!
00100010	"
00100011	#
00100100	\$
00100101	%
00100110	&
00100111	'
00101000	(
00101001)
00101010	*
00101011	+
00101100	,
00101101	-
00101110	.
00101111	/
00110000	0
00110001	1
00110010	2
00110011	3
00110100	4
00110101	5
00110110	6
00110111	7
00111000	8
00111001	9
00111010	:
00111011	;
00111100	<
00111101	=
00111110	>
00111111	?
01000000	@
01000001	A
01000010	B
01000011	C
01000100	D
01000101	E
01000110	F
01000111	G
01001000	H
01001001	I
01001010	J
01001011	K
01001100	L
01001101	M
01001110	N
01001111	O

<u>Binary</u>	<u>Value</u>
01010000	P
01010001	Q
01010010	R
01010011	S
01010100	T
01010101	U
01010110	V
01010111	W
01011000	X
01011001	Y
01011010	Z
01011011	[
01011100	\
01011101]
01011110	^
01011111	
01100000	`
01100001	a
01100010	b
01100011	c
01100100	d
01100101	e
01100110	f
01100111	g
01101000	h
01101001	i
01101010	j
01101011	k
01101100	l
01101101	m
01101110	n
01101111	o
01110000	p
01110001	q
01110010	r
01110011	s
01110100	t
01110101	u
01110110	v
01110111	w
01111000	x
01111001	y
01111010	z
01111011	{
01111100	
01111101	}
01111110	~
01111111	DEL (delete)

Work Sheet for Module-4

C(Cipher)	F	{	y
C (Cipher in bin.)	0 1 0 0 0 1 1 0	0 1 1 1 1 0 1 1	0 1 1 1 1 0 0 1
? (What?)			
P			
P			

5	g	s	,
0 0 1 1 0 1 0 1	0 1 1 0 0 1 1 1	0 1 1 1 0 0 1 1	0 1 1 0 0 0 0 0

>	}	a	>
0 0 1 1 1 1 1 0	0 1 1 1 1 1 0 1	0 1 1 0 0 0 0 1	0 0 1 1 1 1 1 0

.	5	q	;
0 0 1 0 1 1 1 0	0 0 1 1 0 1 0 1	0 1 1 1 0 0 0 1	0 0 1 1 1 0 1 1

5	}	q	z
0 0 1 1 0 1 0 1	0 1 1 1 1 1 0 1	0 1 1 1 0 0 0 0	0 1 1 1 1 0 1 0

}	w	;	
0 1 1 1 1 1 0 1	0 1 1 1 0 1 1 1	0 0 1 1 1 0 1 1	

Key

0 0 0 1 0 1 0 1 0 0 0 1 1 1 1 0 0 0 0 1 1 1 0 0

Annex-V

Work Sheet for Module-6 (we are working in **mod (29)**)

2^x	Working	Result
2^1		2
2^2		4
2^3		8
2^4		16
2^5	$32=3$	3
2^6	$(2^5)2 = 3 \times 2$	6
2^7		
2^8		
2^9		
2^{10}		
2^{11}		
2^{12}		
2^{13}		
2^{14}		
2^{15}		
2^{16}		
2^{17}		
2^{18}		
2^{19}		
2^{20}	$(2^5)^4 = (3)^4 = (9)^2 = 81$	23
2^{21}		
2^{22}		
2^{23}		
2^{24}	$(2^4)(2^{20}) = 16 \times 23 = 8 \times 2 \times 23 = 8 \times 17 = 4 \times 2 \times 17 = 4 \times 5$	20
2^{25}		
2^{26}		
2^{27}		
2^{28}		

2^x	Working	Result
7^1		
7^2		
7^3		
7^4		
7^5		
7^6		
7^7		
7^8		
7^9		
7^{10}		
7^{11}		
7^{12}		
7^{13}		
7^{14}		
7^{15}		
7^{16}		
7^{17}		
7^{18}		
7^{19}		
7^{20}		
7^{21}		
7^{22}		
7^{23}		
7^{24}		
7^{25}		
7^{26}		
7^{27}		
7^{28}		

```
//C++ code to get the power of a number mod (p)
#include <iostream>
#include <conio.h>
#define N 100
using namespace std;

void main()
{
    long int p;
    long int g;
    long int a;
    long int b;

    cout << "Enter the value of prime:";
    cin >> p;

    cout <<endl;
    cout <<"Enter the number whose power you want to raise:";
    cin >> g;

    cout <<endl<<"Enter the power you want to raise:";
    cin >> a;
    cout <<endl;

    b=g;
    for(int i = 1; i < a; i++)
        b=(b*g)%p; //Comments:Current value of b is divided by p and
        //the remainder is assigned to it
    cout << g << " Raised to the power " << a <<" is " << b<< endl;
}
```