

EBCDIC, ASCII, and UNICODE Character Codes

TEXT	EBCDIC	ASCII	UNICODE	TEXT	EBCDIC	ASCII	UNICODE
␣	40	20	0020				
,	6B	2C	002C				
.	75	2E	002E				
0	F0	30	0030				
1	F1	31	0031				
2	F2	32	0032				
3	F3	33	0033				
4	F4	34	0034				
5	F5	35	0035				
6	F6	36	0036				
7	F7	37	0037				
8	F8	38	0038				
9	F9	39	0039				
?	6F	3F	003F				
A	C1	41	0041	a	81	61	0061
B	C2	42	0042	b	82	62	0062
C	C3	43	0043	c	83	63	0063
D	C4	44	0044	d	84	64	0064
E	C5	45	0045	e	85	65	0065
F	C6	46	0046	f	86	66	0066
G	C7	47	0047	g	87	67	0067
H	C8	48	0048	h	88	68	0068
I	C9	49	0049	i	89	69	0069
J	D1	4A	004A	j	91	6A	006A
K	D2	4B	004B	k	92	6B	006B
L	D3	4C	004C	l	93	6C	006C
M	D4	4D	004D	m	94	6D	006D
N	D5	4E	004E	n	95	6E	006E
O	D6	4F	004F	o	96	6F	006F
P	D7	50	0050	p	97	70	0070
Q	D8	51	0051	q	98	71	0071
R	D9	52	0052	r	99	72	0072
S	E2	53	0053	s	A2	73	0073
T	E3	54	0054	t	A3	74	0074
U	E4	55	0055	u	A4	75	0075
V	E5	56	0056	v	A5	76	0076
W	E6	57	0057	w	A6	77	0077
X	E7	58	0058	x	A7	78	0078
Y	E8	59	0059	y	A8	79	0079
Z	E9	5A	005A	z	A9	7A	007A

Table 1. EBCDIC, ASCII, UNICODE for Latin Alphabet

Non-printing codes used for control purposes are not shown in this table.

Problems: Code the following in hexadecimal using EBCDIC and ASCII, and then code each into binary. Notice upper and lower case, letters and numbers.

1) 2 Boys

Character	2	b	B	o	y	s
EBCDIC						
Binary	____:____	____:____	____:____	____:____	____:____	____:____

Character	2	b	B	o	y	s
ASCII						
Binary	____:____	____:____	____:____	____:____	____:____	____:____

2) 1 Girl

Character	1	b	G	i	r	l
EBCDIC						
Binary	____:____	____:____	____:____	____:____	____:____	____:____

Character	1	b	G	i	r	l
ASCII						
Binary	____:____	____:____	____:____	____:____	____:____	____:____

The purpose of problems 3 and 4 is to illustrate that different characters that appear similar have different codes. Be sure to read the problem notes before doing the problem. Distinguish between numbers, upper case letters, and lower case letters.

3) Hi bHo b10 bIO?

Notes:

- “Hi” are letters.
- “Ho” are letters.
- “10” are numbers.
- “IO” are letters, followed by punctuation.

one gezillion ☺

Character	H	i	b	H	o	b
EBCDIC						
Binary	:	:	:	:	:	:
ASCII						
Binary	____:	____:	____:	____:	____:	____:

Character	1	0	b	l	O	?
EBCDIC						
Binary	:	:	:	:	:	:
ASCII						
Binary	____:	____:	____:	____:	____:	____:

4) 2ZS50o b1li.

- 2ZS5 Number, Letter, Letter, Number
- 0Oo Number, Letter, Letter
- 1li. Number, Letter, Letter, Punctuation

Character	2	Z	S	5	0	O
EBCDIC						
Binary	:	:	:	:	:	:
ASCII						
Binary	____:	____:	____:	____:	____:	____:

Character	o	b	l	l	i	.
EBCDIC						
Binary	:	:	:	:	:	:
ASCII						
Binary	____:	____:	____:	____:	____:	____: