

Homework 1 – Number of System and Codes

Student's Name: _____

Instructions:

- You have to show all work in order to receive full credit
 - Grading: 5 pts each
-

Make the following conversion (question 1-11):

1) Given 1011101_2 , what would be its decimal value	2) Given $A3E_{16}$, what would be its decimal value
3) Given 28418_{10} , what would be its hexadecimal value	4) Given 56_{10} , what would be its binary value
5) Given 461_8 , what would be its decimal value	6) Given 70_{10} , what would be its octal value

7) Given $8A5_{16}$, what would be its binary value

8) Given 135_8 , what would be its binary value

9) Given 1010011011_2 , what would be its hexadecimal value

10) Given 10000101_2 , what would be its octal value

11) Given the following display number 895_{10} , what would be its BCD value?

12) What is the message of the following hexadecimal code? **48 65 79 50 41 55 4C**

Hint: use the ASCII code chart to decode the message.

ASCII Code Chart

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL	SOH	STX	ETX	EOT	ENQ	ACK	BEL	BS	HT	LF	VT	FF	CR	SO	SI
1	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
2		!	"	#	\$	%	&	'	()	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{		}	~	DEL

Perform the following arithmetic operation (question 13 to 16)

13) $1101 - 110$

14) $1110 - 1001$

15) $110 + 11$

16) $1011 + 101$

Write in binary code, each of the following negative numbers (question 17-20)

17) -32_{10}

18) -56_{10}

19) -126_{10}

20) -18_{10}

-----**HOMEWORK 1 ENDS HERE**-----