1. (a) I.

Hex	Binary
C41	1100 0100 0001
92A	1001 0010 1010
EAB	1110 1010 1011

II.

Binary	Hex
1111 0000 1000	F08
1010 1011 0011	AB3
1101 1001 0101	D95

(b). 1111 0101 in 8 bit 2's complement is -11.

First subtract 1 from 8bit2s complement = 1111 0100
Then invert numbers = 0000 1011
Then convert binary to decimal = 11

Now to find sign you must look to the leftmost number on the 8bit2s complement. A one is negative and a zero implies that the number is either positive or zero. In this case it is a 1 thus the number is -11, not 11.

0000 1001 in binary.

8 4 2 1
1 0 0 1

8 + 1 = 9

1111 0101
x 00001001
1111 0101
0 0000 0000
00 0000 0000
111 1010 1000
1000 1001 1101

the least significant 8 bits are 1001 1101 which implies a negative number
thus we must invert = 0110 0010
now we conver to decimal

0 1 1 0 0 0 1 1
128 64 32 16 8 4 2 1

which implies that the decimal value is = 64 + 32 + 2 + 1 = 96 + 3 + 99
which with the negative value is -99.

47:8d:4c:56:a5:39 represents a mac address. This mac address is in this form because they are to base 16. the binary eqivilant would be 0100 0111 1000 1101 0100 1100 0101 0110 1010 0101 0011 1001

69.89.31.226 represents a IP address.

256 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1

0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 == 64 = 001000101
0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 == 89 = 001011001
0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 == 31 = 000011111
0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 = 226 = 011100010

A	B	1	2	3	4
0	0	off	off	off	on

0	1	off	on	off	off
1	0	on	off	off	off
1	1	off	off	on	off