Binary coded decimal (BCD) Lecture 9 write each & every digit in 4 bit binary

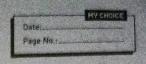
-> 4bit = Nibble (362.41)10 00/1 0/10 00/0 · 0/00 0001 = BCD (4921.8)= (0100 1001 0010 0001. 1000) BED (10010001001.1)pc0 -> 989.8 before point RTL & after point LTR make cell of four and write decimal. BCD addition

-> If we get invalid BCD or corny generated

thed add decimal 6 to the result. 0 to 9 - valid bed, 10-15 invalid bed 92 (000 91 0010 0111 0110 valid - 8 1000 1111 0110 00010001 15 Ay

√The €

10000 1000 1000 => 0110 000 0 1 1 0 (16),0 pro 1,0000 Auxilary - carry generated when to add two Nibbles are added Cassy D-> arry 86 0101 1000 95 1000 0110 78 7 40111 1009 8 0100 1000 11111110 10100000 01/00010 0110 0110 101100100 100000110 1 6 4 - (164)0 inv inv inv 06 0101 1000 (10111100 -101) -> () 0100 0111 valid ~ 100,1 1/1) -> invalid 0110, -7 added 6 1011 1100 . 1010 invelia 2 10100101 0110 0110 . 0110 added 6 40110 V 100/00011.0000 1000000101 10 5 > (105)10 Aug (123.0) 10 Aug (1111 11011.111) Bod to (1,0? 0001/11/1011.1110 0110 0110 . 0110 100110001000100 -7 (2624)10 2 6 2 √The Good Paper



o Using 9's compliment

9 9 1001

-5 +9 -> (xtr.) 3+0100

-5 1101 invalid

13 0110.

+6 -> extra 100110

19 -16 0100 Amy

+1

4

Take 9's compliment of Subtrahand and addit to menuend

o St final carry is generated or Invalid to bed then add 6 dearmal to the result Answer

is the 8 is given by after adding end aroud carry at 1/ast blace "

is the B is given by after adding end around corry at last place "
If we get valid bed and corry not generated then and is -ve and is 9's compliment

* Self Complimenting Goole

Base 10 => Excas-3 code is self Complementing

X-3 -> BCD+3

 $(123.4) \longrightarrow ()_{7-3}$

D1001010 0110 . 0111) x-3 = BCD +3

0 to2 invalid x-3, \$3 to 12 - validx. 14 to 16 -7 invalid x-3 1's compliment of the Goded
number gives the 9's
compliment of the number
itself
1's compliment -0100-1 TD101-12 D110 -3 2 -> 0/0/ -> 10/0 -7 N+3 101117-4 110001-5 L1001-6 7 - 010 - 7 9's compliment of 2 2 7 1011-8 1100-9 -> (0110)x-3 -> [00] < 9's compliment of 3 = 6 7 (0111)x-3 - 1000 - 75 918 compliment of 4 1