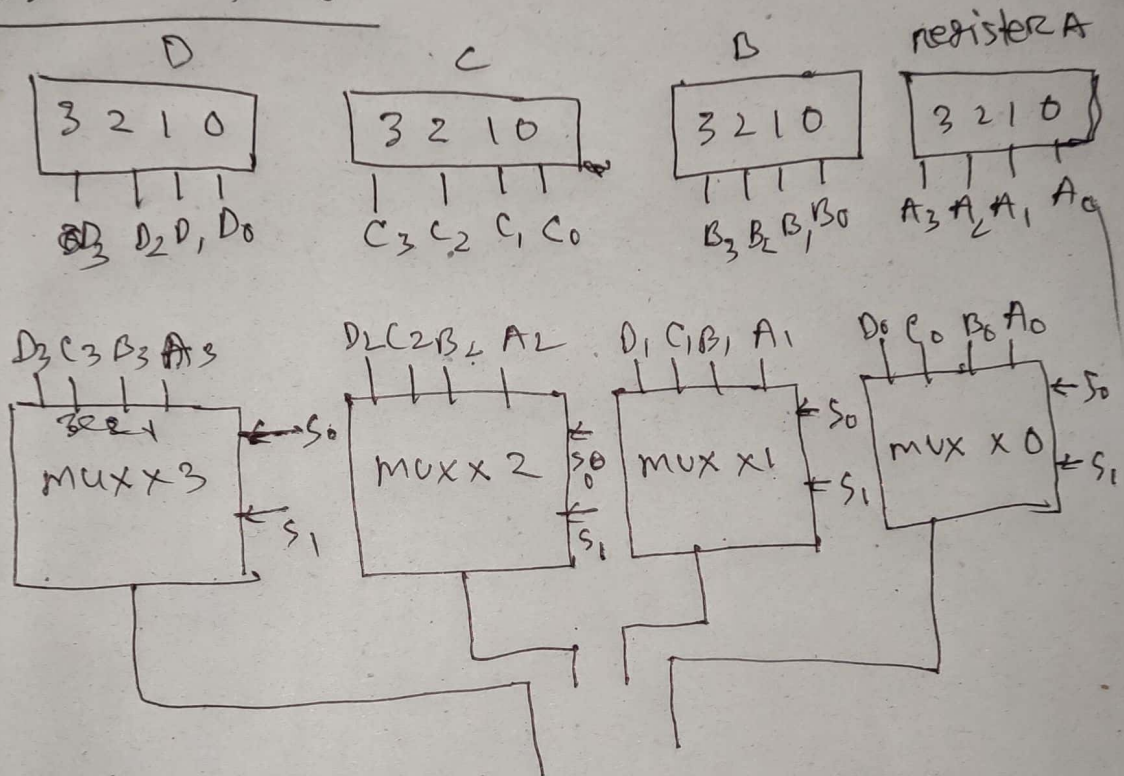


Ans to the Q.no:1

Bus transfer:



← line ~~that~~ common ~~bits~~ bus.

		register selected
S <sub>1</sub>	S <sub>0</sub>	
0	0	A
0	1	B
1	0	C
1	1	D



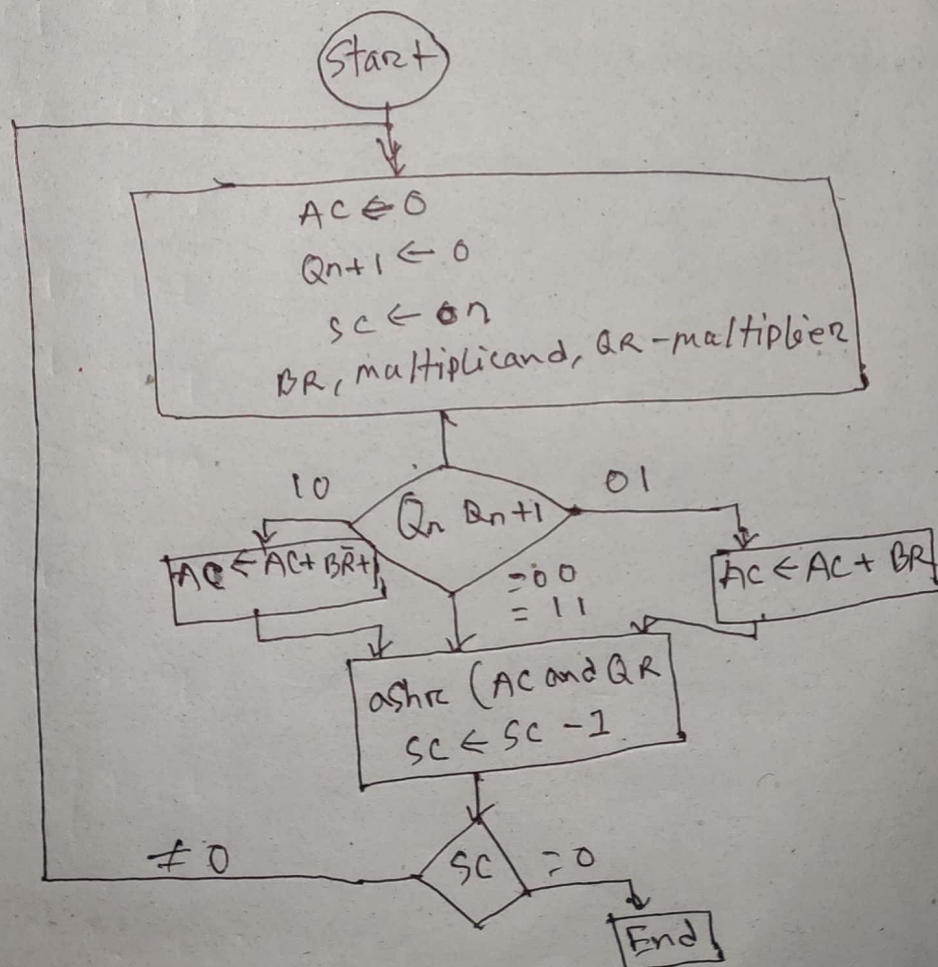
193002101

Ans to que : 2

Booth's Algorithm:

Booth's multiplication Algorithm:

The booth algorithm is a multiplication that allows us to multiply the two signed binary integers in 2's complement.





In the above flowchart,  $A_c$  and  $Q_{n+1}$  bits are set to 0 and the  $SC$  is a sequence total bit set  $n$ , which is equal to the number of bits in the multiplier.

$BR$  represent the multiplicand bits.

$QR$  represent the multiplier bits.

After that, we encountered two bits of the multiplier as  $Q_n$  and  $Q_{n+1}$ .  $Q_n$  represent the last bit of  $QR$  and  $Q_{n+1}$  represent the ~~increment~~ incremented bit of  $Q_n$  by 1.



Ans the Q. no: 3

$A = 0, Q_{-1} = 0, Q = 0111, h = 4, m = 1011,$   
 $-m = 0101$

h	A	Q	Q <sub>-1</sub>	comment
4	0000	0111	0	Step - 1
4	0101	0111	0	Step - 2A
3	0010	1011	1	Step - 3
3	0010	1011	1	Step - 2C
2	0001	0101	1	Step - 3
2	0001	0101	1	Step - 2C
1	0000	1010	1	Step - 3
1	1011	1010	1	Step - 2B
0	1101	1101	0	Step - <del>2</del> 3
0	1101	1101	0	Step - 4

∴ result is 11011101