Question 1
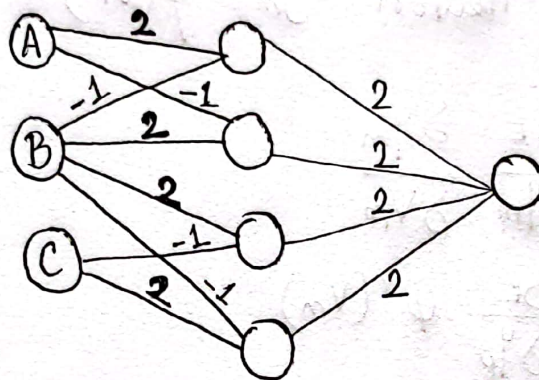
$$F(A,B,C) = AB + BA' + BC' + CB'$$

Given, A, B, C = inputs

F = output

& Each neuron with threshold 2.

A	B	C	A'	B'	C'	AB'	BA'	Bc'	CB'	F
0	0	0	1	1	1	0	0	0	0	0
0	0	1	1	1	0	0	0	0	1	1
0	1	0	1	0	1	0	1	1	0	1
0	1	1	1	0	0	0	1	0	0	1
1	0	0	0	1	1	1	0	0	0	1
1	0	1	0	1	0	1	0	0	0	1
1	1	0	0	0	1	0	0	1	1	1
1	1	1	0	0	0	0	0	0	0	0

So, from the above truth-table we can see that this is clearly an XOR gate. As, this is an XOR gate, these gates are not linearly separable.

Thus this is not linearly separable.

Healthcare

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