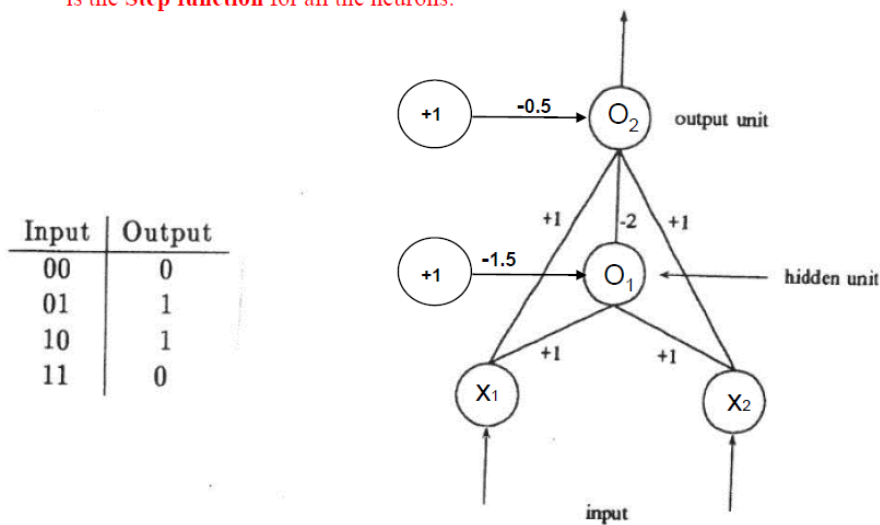


Q.1: Figure below shows a neural network involving a single hidden neuron for solving XOR problem. Show this network solves the XOR problem by constructing (a) decision regions for neuron O_1 (hidden neuron), (b) neuron O_2 (output neuron which has **three inputs** decision boundary is a plane use MATLAB to plot) and (c) a truth table for the network. **Activation function is the Step function for all the neurons.**



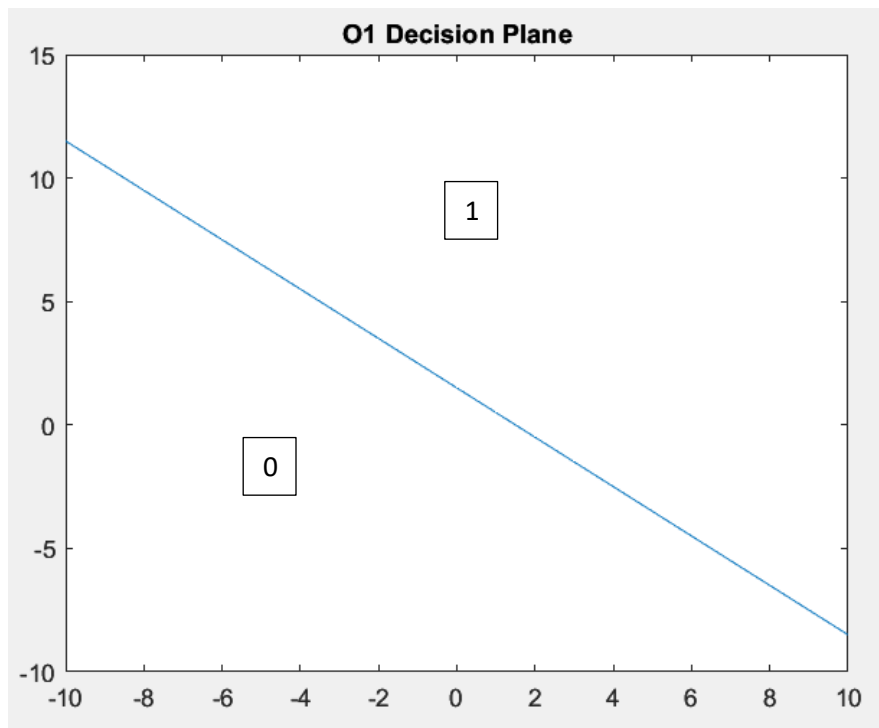
$$O1 = x1 + x2 - 1.5$$

$$O2 = x1 + x2 - 2O1 - .5 ;$$

Truth Table

X1	X2	O1	O2
0	0	0	0
0	1	0	1
1	0	0	1
1	1	1	0

O1 Decision line



O2 Decision Plane

