Q1) *[7 Marks]*

Consider a discrete Hopfield memory with five neurons.

A- Find the weight matrix to store the following two vectors.

   (1 1 1 1 1) , (1 1 -1 -1 1)

B- Draw the network.

C- Test the network using the vector (1 1 1 1 -1).

Q2) *[8 Marks]*

Consider a BAM with 4 X-layer units and 2 Y-layer units.

A- Find the weight matrix to store the following associations:

S	T
1 0 0 0	1 0
1 1 0 0	1 0
0 0 0 1	0 1

B- Apply the input vector (0 0 1 1) to the network.

Good Luck