#### **Zarka Private University**

#### Faculty of Science - Department of Computer Science Third Examination - Second Semester 2002 - 2003 Neural Networks 0306483

Date: 28 May 2003 Time: 1 Hour

### **Q1**) [8 Marks]

Apply the perceptron-learning algorithm to design a perceptron that perform the following classification problem and draw the final design for the net.

$\mathbf{x}_1$	X2	X3	У
-1	-1	1	1
1	1	-1	1
1	-1	1	-1
1	-1	-1	1
1	1	1	1

## **Q2**) [7 Marks]

Consider a BAM with 5 X-layer units and 3 Y-layer units.

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

S	T	
1 0 0 0 1	1 1 0	
1 1 0 0 1	0 1 0	
0 0 0 10	0 0 1	

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

# **Good Luck**

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