1. For the following Back-propagation Neural Network, assume that the feature vector, X = [1, 0] and desired output vector, Y = [0, 1], the threshold value $\theta_3 = \theta_4 = \theta_5 = 0.2$ and learning rate, alpha = 0.1. Consider the weights as follows. Here, % refers to mod operation. Find out:

i) Predicted output of the hidden layer (neuron 3, 4 and 5)
ii) Predicted output of the output layer (neuron 6, 7)
iii) Updated weight of output layer (W_{36}, W_{37}, W_{46}, W_{47}, W_{56}, W_{57}) after one iteration

$W_{13} = 0.3$	W_{14} = (Last 2 digits of your ID) mod 3 – 0.5	$W_{15} = 0.5$
W_{23} = (Last 2 digits of your ID) mod 2 – 0.2	W_{24} = (Last 2 digits of your ID) mod 4 – 0.2	$W_{25} = 0.2$
$W_{36} = - 0.4$	$W_{37} = W_{14} + 0.5$	$W_{46} = W_{15} - 0.3$
$W_{47} = - W_{23} - 0.3$,	W_{56}= (Last 2 digits of your ID) mod 5 - 0.4	W_{57}=0.1