Page No.:
Date:

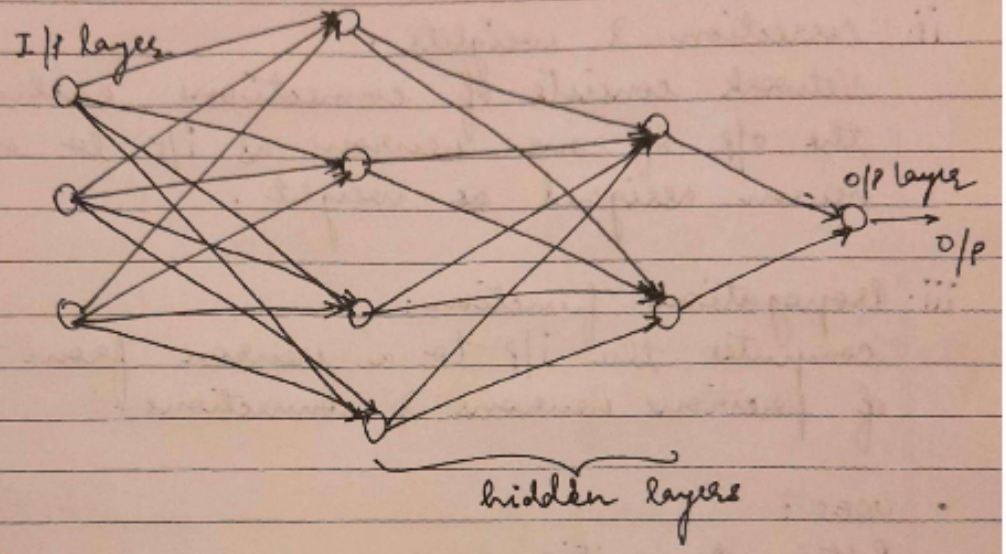
ASSIGNMENT - 10

TITLE : VISUALISING ANN

THEORY :

- ARTIFICIAL NEURAL NETWORKS

Computing system vaguely inspired by biological neural computing network in human brain



- HOW DO ANNs WORK ?

- Each NN learns by processing i/ps, each of which contains a known i/p & result
- Training of a NN from given sample is usually conducted by determining the difference b/w processed o/p & target o/p.
- If there is error, the network adjusts the weighted association according to a learning rule using this error value.
- Successive adjustments are simple iterations will cause it to produce an o/p increasingly similar to expected.

• COMPONENTS OF ANN:

i. Neurons:
Each neuron has i/p & produces an o/p which then used as i/p for other neurons. We take weighted sum of all the i/p, this is called activation.

ii. Connection & weights:
Network consists of connections, each providing the o/p of one neuron as i/p to another neuron assigned as weight.

iii. Propagation function:
computes the i/p to a neuron from the o/ps of previous neurons & connections

• USES:
- Pattern Recognition
- Robotics
- Classification

• FREQUENTLY USED ANNs:
- FFNN
- MLP
- CNN
- RNN

CONCLUSION:
Hence we learnt & implemented ANN & its visualization.