

**Code No: NR-410**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

MCA IV Semester Supplementary Examinations January 2010

# ARTIFICIAL NEURAL NETWORKS

**Time: 3 hours****Max.Marks:60**

**Answer any FIVE questions**

**All questions carry equal marks**

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- 1.a) Explain in detail the different Architectures of ANN.  
b) Give historical development of neural network principles
2. Explain about activation dynamics and synaptic dynamics model of neural network.
3. Draw the basic pattern recognition system and explain in detail how ANN can be used efficiently in pattern recognition tasks.
4. Explain in detail the following networks.  
a) Pattern classification network  
b) pattern mapping network
5. Derive the equation for weight change in Boltzman machine network.
- 6.a) Explain in detail the components of a competitive learning network  
b) Writ short notes on Self organizing feature maps.
7. Explain in detail the stability- plasticity dilemma and explain how ART network could solve this problem.
8. Explain in detail any two application of ANN.

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