Code No. OR21/DSCE **OR**

JAWAHARLAL NEHRU TECHNOLOGY UNIVERSITY, HYDERABAD
M .Tech. II Semester Supplementary Examinations, March-2009
ARTIFICIAL NEURAL NETWORKS
(Digital Systems & Computer Electronics)

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

Answer any Five questions
All questions carry equal marks

1.a) Explain in detail the function of biological neuron.
b) With neat block diagram explain supervised and unsupervised learning rules.

2.a) Explain delta learning rule and window-hoff learning rules.
b) Explain why single layer network could not solve linear inseparable classes classification.

3. State and prove perseptron convergence theorem.

4. For a back propagation network derive the equation for weight change in the hidden and output layers.

5.a) Explain in detail about kohonen self organizing network.
b) With block diagram explain ART network.

6.a) Prove that for continuous Hopfield networks energy decreases as iteration progress.
b) Explain in detail about boltzman machine network.

7. Explain how neural networks are used in solving simultaneous linear equation.

8. Write short notes on:
a) Polynomial networks b) Adaline.

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