B. Tech Degree VII Semester Examination, November 2008

IT/CS/EC/EI/EB 705 (C)
ARTIFICIAL NEURAL NETWORKS
(2002 Scheme)

Time : 3-Hours Maximum Marks : 100

I.	(a)	What is linear separability? Explain the Ex-OR problem in perceptrons.	(12)
	(b)	Define an activation function. Describe the various activation functions used.	(8)
		OR	
II.	(a)	Compare and contrast supervised and unsupervised training methods.	(10)
	(b)	Explain the perceptron training algorithm.	(10)
III.	(a)	Describe the methods used for biasing neurons in a backpropagation network.	(12)
	(b)	Explain the problems in backpropagation training.	(8)
		OR	
IV.		Explain how back propagation network is trained.	(20)
V.	(a)	Explain how the weight vectors are initialized in a counter propagation network.	(12)
	(b)	Briefly explain the applications of counter propagation network.	(8)
		OR	
VI.	(a)	Describe the two modes of operation of counter propagation network.	(15)
	(b)	Differentiate between accretive and interpolative modes of Kohonen network.	(5)
VII.	(a)	Explain the statistical training method.	(10)
	(b)	Compare and contrast backpropagation and cauchy training methods.	(10)
		OR	
VIII.		Briefly explain (i) the Boltzmann training method (ii) Artificial specific heat methods.	(20)
IX.	(a)	Explain the architecture of the ART network.	(12)
	(b)	Write short note on genetic algorithms.	(8)
		OR	
X.	(a)	Briefly explain how data retrieval and encoding are done in a BAM.	(10)
	(b)	Explain how stability is achieved in a Hopfield network.	(10)

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