BTS(C) – VII– (S) - 09 – 034 - F

B. Tech Degree VII Semester (Supplementary) Examination, July 2009

IT 701 NEURO COMPUTING

(1999 *Scheme*)

Time: 3 Hours Maximum Marks: 100

I.	a.	Discuss the biological prototype of Artificial Neural Networks and explain an Artificial Neuron.	(12)
	b.	Briefly explain the different classes of PDP model.	(8)
		OR	
II.	a.	Explain the concept of linear separability with suitable example.	(12)
	b.	Write notes on (i) Generalization-abstraction (ii) Fault tolerance	(8)
III.	a.	Explain Back propagation Algorithm and its derivation.	(12)
	b.	Discuss any two tasks that can be performed by Back propagation networks.	(8)
		OR	
IV.	a.	What are the limitations of single layer perceptrons and how are they modified?	(10)
	b.	Comment on Multilayer perceptron.	(4)
	c.	Briefly explain an ADALINE model.	(6)
V.	a.	Explain the three stages in the operation of an ART network.	(12)
	b.	Briefly explain the different classification of ART network.	(8)
		OR	
VI.	a.	Explain the typical applications of ART networks.	(12)
	b.	Explain the characteristics of ART networks.	(8)
VII.	a.	Discuss about the stability of recurrent networks.	(8)
	b.	Explain the structure of Hopfield network and how the training process is done in this network.	(12)
		OR	
VIII.	a.	Briefly explain about synchronous and asynchronous updating process of Hopfield network.	(10)
	b.	Explain how data is stored and retrieved in BAM.	(10)
IX.	a.	What is a Kohonen layer? Explain the train process in Kohonen layer.	(10)
	b.	Explain vector quantization and pattern association with reference to Kohonen layer.	(10)
		OR	
X.	a.	Discuss the use of Kohonen's model in feature extraction applications.	(10)
	b.	Briefly explain the Cognitron model.	(10)

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