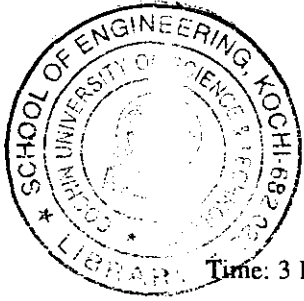


BTS 074(A)



## ***B.Tech Degree VII Semester Examination December 2002***

### **IT 701 NEURO COMPUTING (1999 Admissions)**

Time: 3 Hours

Maximum Marks: 100

- I. (a) Distinguish between supervised and unsupervised learning. (10)  
 (b) Explain different classes of PDP models. (10)
- OR**
- II. (a) Distinguish between Artificial Neural Networks and Biological neural networks. (10)  
 (b) Explain any 4 learning Laws. (4 x 2½ = 10)
- III. (a) Explain perceptron learning algorithm. (10)  
 (b) Describe ADALINE MODEL. (10)
- OR**
- IV. (a) Explain Linear separable problem and its solution. (10)  
 (b) Give suitable example and multilayer perceptron representation of a nonlinearly separable problem. (10)
- V. (a) What are the two paradigms of Adaptive Resonance Theory ? Give the structure of ART 1. (10)  
 (b) Explain the operation phases of ART 1. (10)
- OR**
- VI. (a) How Gain control and Reset control takes place in ART 1 ? (8)  
 (b) Give an ART training example. (8)  
 (c) What are the applications of ART. ? (4)
- VII. (a) Explain how BAM recalls the stored information. (10)  
 (b) Show that the Hopfield network with symmetric weight matrix and no self looping will always be stable. (10)
- OR**
- VIII. (a) Describe the structure of Bidirectional Associative memories. (10)  
 (b) Explain on memory capacity of BAM. (6)  
 (c) How you can encode information using BAM ? (4)
- IX. (a) Discuss the training algorithm for Kohonen's self organizing feature map. (10)  
 (b) Explain what happens in Kohonen's self organising map if the initial weight vectors are randomly chosen. (10)
- OR**
- X. (a) Describe Cognitron model. (10)  
 (b) Explain the training methods of Cognitron. (10)