

***B.Tech. Degree VII Semester Examination  
November 2008***

**IT 701 NEURO COMPUTING  
(1999 Scheme)**

Time: 3 Hours

Maximum Marks: 100

- I a) Briefly explain the different classes of PDP model. (10)  
b) Discuss about the different neural network learning rules. (10)  
**OR**
- II a) Explain any two activation functions and storage efficiency of a neural network. (10)  
b) Briefly explain supervised learning with a suitable example. (10)
- III a) Explain back propagation algorithm and its derivation. (12)  
b) Discuss about any two tasks that can be performed by a back propagation network. (8)  
**OR**
- IV a) What is linear separability? Explain how an X – OR problem can be solved (ie., linear inseparability cases) (12)  
b) Describe an ADALINE model. (8)
- V a) Briefly explain the characteristics of ART. (5)  
b) What is the significance of resonance in ART? (5)  
c) Describe the functioning of recognition layer in ART. (10)  
**OR**
- VI a) Explain the operation of an ART for binary patterns. (12)  
b) Briefly explain about gain control mechanism in ART. (8)
- VII a) What is a recurrent network? Explain with a suitable example. (8)  
b) Briefly explain a Hopfield network and its important characteristics. (12)  
**OR**
- VIII a) Comment on the applications of Hopfield network. (8)  
b) Explain about Bidirectional Associative memories and encoding associations. (12)
- IX a) Describe a counter propagation network. (8)  
b) Explain Kohonen's map of self organizing network. (12)  
**OR**
- X a) Briefly explain the Cognitron model. (8)  
b) Discuss about the use of Kohonen model in feature extraction applications. (12)

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