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B.E. 7th Semester (CSE) Examination,

May-2012

NEURAL NETWORK

Paper-CSE-407-E

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five questions .

1. (a) Explain the structure of artificial neuron in detail. 10
- (b) Differentiate between artificial and biological neuron in detail. Also discuss various applications of neural network. 10
2. Explain the various models of artificial neural network with their corresponding advantages and disadvantages. 20
3. (a) What do you mean by discrete perceptron ? Explain the use of discrete perceptron in multi layer perceptron model. 10
- (b) Explain the Hebbian learning rule in detail. 10

4. (a) What are various learning rules for multi-perceptron neural network ? Explain these learning rules with their equations. 10
- (b) Define the following terms :
Delta learning rule, separable pattern classification. 10
5. Explain the various architectures of Hopfield network in detail. How learning process occurs in Hopfield network ? 20
6. (a) What is associative memory ? Explain its various types in detail with suitable example. 10
- (b) Explain storage and retrieval algorithm for associative memory. 10
7. (a) Describe unsupervised learning of clusters with suitable example. 10
- (b) Explain separation limitation for unsupervised learning. 10

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8. Write short notes on the following :

- (a) Correction learning rule. 5
- (b) Bi-Directional associative memory. 5
- (c) Biological neuron. 5
- (d) Learning factors. 5

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