Roll No. .....

## 24489

# B. Tech. 7th Semester (CSE) Examination – May, 2015

#### **NEURAL NETWORKS**

Paper: CSE-407-F

Time : Three Hours ]

[ Maximum Marks: 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note: Question No. 1 is compulsory. Attempt five questions in total selecting one question from each Section.

(a) Application of ANN

 $4 \times 5 = 20$ 

- (b) Biological Neuron
- (c) Clustring
- (d) Role of learing factors

#### SECTION - A

Explain various models of ANN with their corresponding advantages & disadvantages.
20

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P. T. O.

- **3.** (a) Use MC culloch- Pitts neuron to design logic networks of AND & OR Logic function.
  - (b) Write short note on Widrow-Hoff learning rule.

10

10

#### SECTION - B

- (a) Explain the linearly separable classification with suitable example.
  - (b) Explain Error Back propagation training algorithm. http://www.HaryanaPapers.com 10
- 5. (a) In which manner multilayer perception models differ from single layer perception model. Explain the reasons for emergence of multilayer perception model.
  - (b) Write short note on delta learning rule.

#### SECTION - C

 Explain the various architectures of Hopfield network in detail. How learning process occurs in Hopfield network.

- 7. (a) Explain the architecture of associative memory in detail. Also discuss its retrieval algorithm.10
  - (b) Explain how encoding & decoding takes place in associative memory.

### SECTION - D

8. Write short note on:

- $4 \times 5 = 20$
- (a) Unsupervised learning of clusters
- (b) Recall mode
- (c) Initialization of weights
- (d) Seperability limitation
- 9. What is competitive learning? How it is different from conventional learning? Discuss its significance & usefulness in neural networks.

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