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NCS - 074

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2012266 Roll No.

B.TECH.

Regular Theory Examination (Odd Sem-VII), 2016-17

HIGH SPEED NETWORK

Time : 3 Hours *Max. Marks : 100*

Section - A

1. Answer all parts. All parts carry equal marks. Write answer of each part in short. (10×2=20)

a) Compare neural networks with conventional computers.

b) What is the role of activation function in a artificial neuron?

c) What is a gradient decent training algorithm?

d) State the objectives of PCA.

e) Give an example for BP network with one hidden layer.

f) Define SOM.

g) Distinguish between feed forward network and recurrent network.

h) Draw the RBF network architecture.

i) State the advantages of complex valued NN over real valued neural network.

j) Enumerate the components of soft computing.

Section - B

Note: Attempt any five questions from this section (5×10=50)

2. Discuss salient features of competitive learning.

3. Explain in detail about supervised and unsupervised learning and show how it varies.

4. Discuss in detail about BP algorithm.

5. Compare the radial basis function networks and the multilayer perception.

6. Discuss in brief, RPROP algorithm.

7. Write in detail about non linearly separable problems with an example.

8. Compare PCA and ICA. for feature extraction.

9. How the integration of Neuro-Fuzzy and genetic techniques works? Explain.

Section - C

Attempt any two questions from this section. (2×15=30)

10. Explain in detail about the components of SOM? Write down the SOM algorithm.

11. How to use Resilient Back Propagation to train Neural Networks? Explain with an example.

12. Write short notes on following:

a) Artificial neuron models.

b) Activation functions.

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