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BICSE-003

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

00901

Term-End Examination
June, 2014

BICSE-003 : NEURAL NETWORK

Time : 3 hours *Maximum Marks : 70*

Note : *Answer any **seven** questions. All questions carry equal marks.*

1. Define neural network. What do you mean by biological activations of a neuron ? Explain with neat diagram and also explain the functional units. *10*

2. (a) Define Pocket algorithm. Write down the steps for the algorithm. *5*

(b) Write the Back Propagation algorithm. *5*

3. (a) What is the expansion of Adalines ? Explain with a neat diagram. *5*

(b) In what way is the Adalines algorithm used ? Write down the algorithm. *5*

4. Write short notes on the following :

(a) Marchand's algorithm applied to the corner isolation problem. *5*

(b) Network development using Upstart algorithm. *5*

5. (a) Draw and explain the recurrent network with hidden nodes, to which Williams and Zipser's training procedure can be applied. *5*

(b) Write the steps for supervised training algorithm for a network proposed by Williams and Zipser. *5*

6. What is Supervised learning and Unsupervised learning ? Differentiate between the both of them. *10*

7. (a) Explain the architecture of the full counter propagation neural networks. *5*

(b) Briefly write the points for adaptive resource theory. *5*

8. (a) What is a selective-attention network ? Explain with a neat sketch. *5*

(b) Write a short note on storage capacity of Hopfield networks. *5*

9. (a) What is gradient descent and how is it explained using Hopfield network models ? *5*

(b) Write the algorithm steps for Stimulated Annealing. *5*

10. What are the applications of neural networks ? Explain with any 5 examples. *10*
