BICSE-003

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

Term-End Examination
December, 2014

00226

BICSE-003 : NEURAL NETWORK

Time : 3 hours   *Maximum Marks : 70*

Note : *Answer any **seven** questions. Assume the missing data, if any. All questions carry equal marks.*

1. Describe the features of the biological Neural Network that makes it superior to the sophisticated Artificial Intelligent Computer System for patterns recognition task.   *10*

2. Describe the architecture of Perceptron Training algorithms with suitable examples.   *10*

3. Discuss the functioning of Adaptive Multilayer Networks. What are the strengths and limitations of such networks ?   *10*

4. Draw and explain the architecture of Radial Basis Function (RBF) Networks.   *10*

5. Discuss Hebb's rules in context to   *2×5=10*
    (i)   Supervised learning
    (ii) Unsupervised learning

6. What do you understand by Associative Networks ? In this context explain working of a Hopfield Network. *10*

7. (a) What is Fuzzy set theory ? *5*

    (b) How is Fuzzy logic useful in Neural Networking ? *5*

8. Write an algorithm to implement simulated annealing. *10*

9. What do you mean by Knowledge Engineering ? Explain various stages of Knowledge Acquisition. *10*

10. Write short notes on any *two* of the following : *2×5=10*

    (a) Polynomial Networks

    (b) Bi-directional Associative Memory Networks

    (c) Applications of Neural Networks