

R16

IV B.Tech II Semester Regular/Supplementary Examinations, July - 2021
ARTIFICIAL NEURAL NETWORKS
(Common to Computer Science and Engineering and Information Technology)
Time: 3 hours **Max. Marks: 70**

1.
 - a) Write any four advantages of Neural Networks. [2]
 - b) Define memory-based learning. [2]
 - c) Write the limitations of Perceptron. [3]
 - d) What is a multi layer feedback network? [2]
 - e) Write a short note on Regularization. [2]
 - f) What is Conceptual problem in SVM? [3]

2. a) Discuss various linear and nonlinear activation functions used in Artificial Neural Networks. [7]
b) What are the benefits of Neural networks? Explain the functioning of Biological Neuron. [7]
3. a) Explain the importance of Mathematical Models of Hebbian Modifications. [7]
b) Discuss about Error correction learning. [7]
4. a) Explain the need for a Bayes classifier. [9]
b) Discuss about Perceptron convergence theorem. [5]
5. a) Explain the practical and design issues of Back Propagation Learning. [7]
b) Discuss the importance of back propagation training and convergence mechanism. [7]
6. a) Explain the Cover's theorem on the separability of patterns. [7]
b) Explain about generalized Radial Basis Function networks. [7]
7. a) Discuss the need for an Optimal hyper plane for nonseparable patterns. [7]
b) Explain the significance of Linear Separability and Optimal Hyper Plane. [7]

