Roll No. ..... Total Pages : 02

BT-5/D-23 45276

ARTIFICIAL NEURAL NETWORKS
PC-CS-AIML-307A

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Distinguish between Biological neural network and Artificial neural networks. 7

   (b) Show the mapping and structural view point of ANN. 8

2. Explain various Optimization Algorithms for Training Neural Network with its advantages and disadvantages. 15

Unit II

3. Show the graphical representation of sigmoid function and differentiate the sigmoid function and comment on the result. 15

4. (a) Explain back propagation training algorithm with its merit and demerits. 8

(b) Explain bidirectional associative memories. 7

Unit III

5. Illustrate the ART architecture. Explain the different types of ART with its classification operations. 15

6. (a) Explain Hopfield network using a suitable example. 10

(b) Explain the architecture of Cognitrons and Neocognitrons. 5

Unit IV

7. What is CNN ? How does it works ? Also explain its limitation. 15

8. Explain the different techniques to improve deep networks. 15