

Exam. Code : 208604

Subject Code : 4488

M.Sc. Information Technology 4<sup>th</sup> Semester

ARTIFICIAL NEURAL NETWORK

Paper-MIT-403

Time Allowed—2 Hours]

[Maximum Marks—100

**Note** :— Attempt any four questions. All questions carry equal marks.

1. (a) Explain the evolution of artificial neural network.  
(b) What is meant by knowledge representation ? Explain by taking examples.
2. (a) Discuss the method of steepest descent in detail.  
(b) State and explain LMS algorithm.
3. (a) Write and explain the steps of Perceptron Learning algorithm.  
(b) Discuss the Boolean function representation using single layer perceptron.
4. (a) Explain the pocket algorithm with retches.  
(b) Discuss the features of a perceptron model.
5. (a) What are the features of Anderson's BSB model ? Explain.  
(b) What are topology preserving maps ? Explain.
6. (a) Explain the use of Adaptive Resonance Theory-2 (ART-2) in detail.  
(b) Discuss the working of Hopfield model.
7. Discuss the applications of Multilayer-perceptron in detail.
8. (a) Write and explain the steps of back-propagation algorithm.  
(b) Demonstrate the concept of handwritten character recognition by taking suitable examples.