Bihar Engineering University, Patna
End Semester Examination - 2022

Course: B.Tech.
Code: 110729

Semester: VII
Subject: ARTIFICAL NEURAL NETWORK

Time: 03 Hours
Full Marks: 70

Instructions:-
(i)   The marks are indicated in the right-hand margin.
(ii) There are **NINE** questions in this paper.
(iii) Attempt **FIVE** questions in all.
(iv) Question No. **1** is compulsory

Q.1 Answer any seven of the following: [2 x 7 = 14]
- (a) Define neural network.
- (b) What are dendrite?
- (c) What is learning rate parameter?
- (d) Mention merits of back propagation network.
- (e) What is Hamming distance?
- (f) Name the two types of Directional Associative Memory?
- (g) What are competitive neural network?
- (h) What is RBF neural network?
- (i) Mention the two layer in ART 1.
- (j) List the main features of RBF NN.

Q.2 (a) Exemplify Linearly seperable problem.   [7]
         (b) Show the mapping and structural view point of ANN.   [7]

Q.3 (a) List and explain different learning laws.   [7]
         (b) Discuss briefly the structure and function of a biological neuron.   [7]

Q.4 (a) Mention the merits and demerits of back propagation network.   [7]
         (b) Discuss briefly the practical considerations in implementation of feed-forward neural networks. [7]

Q.5 (a) What is Hop field memory? Explain briefly.   [7]
         (b) Provide the training algorithm for the RBF NN with its flowchart.   [7]

Q.6 Distinguish between supervisory learning and Un supervisory learning in ANN.   [7]

Q.7 List the factors that affect the performance of multilayer feed-forward neural network.   [14]

Q.8 How does ANN solve an XOR problem?   [14]

Q.9 How are ANN different from normal computers?   [14]