Printed Pages : 1 Roll No. ECS085



**B.TECH.**

**THEORY EXAMINATION (SEM–VIII) 2016-17**

**NEURAL NETWORK**

***Time : 3 Hours*** ***Max. Marks : 100***

***Note :*** *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

## SECTION - A

**1. Attempts all parts. All carry equal marks (10x 2 =20)**

a) Define artificial intelligence.
b) What do you understand by scaling?
c) What do you understand by normalization?
d) What is RBF?
e) What is unsupervised learning?
f) What do you mean by neurocomputing?
g) What is independent component analysis?
h) Define principal component analysis technique.
i) Define delta learning rule.
j) What is feature mapping?

## SECTION - B

**2 Attempt any five questions (10x5 = 50)**

a) Elaborate different normalization techniques used in data processing.
b) What are the factors to be considered while designing a learning rule?
c) Describe common application of SOM.
d) Describe architecture of single layer and multilayer feed forward ANN.
e) What do you understand by scaling and normalization? Explain.
f) Describe the architecture of recurrent network.
g) Describe the activation functions commonly used in BP algorithm.
h) Describe neuro fuzzy genetic algorithm integration.

## SECTION - C

**Attempt any two part. (15x2=30)**

3 What is sum squared error in neural network training? Write down applications of ANN.

4 What is feature extraction? Explain any two feature extraction technique in detail.

5 Write short notes on:
i) RPROP algorithm
ii) Gradient descent rule.
iii)LZ and LZW.