

Roll No.....

Total No. of Printed Pages: [1]

Total No. of Questions: [09]

B. Tech ECE (Semester –7th)
NEURAL NETWORK & FUZZY LOGIC
Subject Code: BECED1-723
Paper ID: [18111338]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

Q1. Attempt the following:

- a. Define supervised training.
- b. What are classifications of activation function?
- c. What are the applications of Neural Networks?
- d. What are the different types of Training?
- e. Define Learning.
- f. What is a perceptron in neural network problems?
- g. What is the McCulloch-Pitts model in neural networks?
- h. Define Artificial Neural Network.
- i. What are associative memories?
- j. Briefly explain structure of Biological Neurons.

Section – B

(5 marks each)

- Q2. List out difference between Fuzzy logic control and PID control.
- Q3. What are Hetro-associative memories?
- Q4. List the properties of Crisp set with example.
- Q5. Define Defuzzification. Differentiate between Fuzzification and Defuzzification.
- Q6. Define back propagation algorithm. What are its applications?

Section – C

(10 marks each)

- Q7. Define Neural Network and state the need for training the Neural Network.
- Q8. What are classical and Fuzzy sets? List the operation on classical and fuzzy sets.
- Q9. Write a short note on:
 - a. K means clustering algorithm
 - b. Competitive Learning