

Registration No:

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Total Number of Pages : 02

M.TECH

M.TECH 2ND SEMESTER REGULAR EXAMINATIONS, MAY 2018
SOFT COMPUTING METHODS AND TECHNIQUES

Branch: CS, Subject Code:MCSPE2041

Time: 3 Hours

Max Marks : 70

PART-A

(10 X 2=20 MARKS)

1. Answer the following questions.

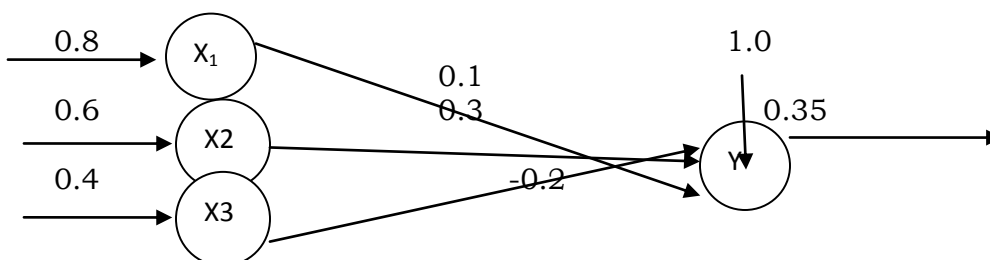
- Explain about Soft Computing, how it is different from hard computing, and its application. (CO1)
- Discuss different techniques used in Soft Computing, its applications. (CO1)
- Differentiate between BNN and ANN. (CO2)
- Explain Biological Neural network in terms of Axon, Synapse, dendrites, Synaptic Gap. (CO2)
- Explain about Perceptron Model. (CO2)
- Explain Delta Rule in brief. (CO1)
- Differentiate between Fuzzy versus Crisp set. (CO1)
- Explain about Rough Set. (CO3)
- Explain about Decision Table. (CO3)
- Write down some of the applications of Genetic Algorithm. (CO3)

PART-B

(5 X 10=50 MARKS)

Answer any five questions from the following.

- Describe the basic model of Artificial Neural Network specified by connections and Activation Functions.
 - Obtain the output of the given neuron Y shown in the figure using activation functions as Binary sigmoidal, Bipolar sigmoidal. [5+5] (CO2)



3. a. Implement AND and NOT function using McCulloch-Pitt's Neuron. Use Binary Data interpretation. [5](CO2)
- b. Explain the training algorithm used for single output classes in Perceptron Network. [5](CO2)
4. a. Describe about the back propagation algorithm and draw its architecture. [5](CO2)
- b. Explain Different phases of Genetic Algorithm in detail [5](CO3)
5. a. Explain different classifications of a Neurohybrid system. [5] (CO3)
- b. Explain with appropriate examples about all the operations in a Fuzzy Set. [5](CO3)
6. a. Explain inference method used for membership value assignment. [5] CO3)
- b. What do we mean by Lambda Cuts in Fuzzy Sets. [5] (CO3)
7. Write short notes on
- a. Fuzzy Database. [5] CO1
- b. Hebb's learning. [5] CO1
8. Write short notes on
- a. Associative Memory. [5] CO2
- b. Feed-forward neural network [5] CO2

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