- What is the difference between a single-layer and a multi-layer feedforward neural network?
- Explain the importance of the softmax activation function.
- Discuss the limitations of fuzzy logic

- Solve a problem like finding a value from a function within a given range.
- Given a student's study hours, will they pass or fail? (This could be a task to be solved using a specific algorithm).

- Explain how a simple vision recognition system could be built using a neural network.
- What is fuzzy logic, and how does it differ from crisp logic?
- Define key terms like "fuzziness," "linguistic variable," and "membership function."
- Explain the components of a fuzzy logic system, including fuzzification, rule-based inference, and defuzzification.
- Describe different types of membership functions and how to assign membership values.
- Explain fuzzy reasoning methods, such as the Mamdani approach.
- What are the different fuzzy set operations (e.g., union, intersection, complement)?
- Define artificial neural network and its components like axons and synapses.
- What is the difference between biological and artificial neural networks?

FUZZY LOGIC – ASSIGNMENT 2

1. Explain briefly the operation of biological neural network with a simple sketch.

2. Discuss supervised learning and unsupervised learning.

3. Describe preceptron learning rule and delta learning rule.

4. Write about Hebbian learning and Widrow-Hoft learning rule.

5. Describe winner-take-all learning rule and outstar learning rule.

6. Describe back propagation and features of back propagation.

7. Describe McCulloch-Pitts neuron model in detail.

8. Write about performance of back propagation learning.

9. Discuss a few tasks that can be performed by a back propagation network.

10. Distinguish between hop field continuous and discrete models.

11. Bring out the salient features of boltzman machine.

12. What is meant by converter propagation? Explain briefly.

13. Explain briefly the back propagation technique.

14. Explain how the ANN can be used for process identification with neat sketch.

15. Discuss the step by step procedure of back propagation learning algorithm in detail.

16. State the advantages and disadvantages of back propagation.

17. Explain the transient response of continuous time networks.

18. Explain the feedback networks of ANN for controlling process.

19. Explain how ANN can be used for neuro controller for inverted pendulum.

20. Differentiate fuzzy set from classical set and name the properties of classical (crisp) sets.

21. A = {(1/2) + (0.5/3) + (0.3/4) + (0.2/5)},

B = {(0.5/2) + (0.7/3) + (0.2/4) + (0.4/5)} Calculate the several operation of the fuzzy set.

22. Discuss varies properties and operations on crisp relation

FUZZY LOGIC ASSIGNMENT 3

1. Explain briefly the operation of biological neural network with a simple sketch.

2. Discuss supervised learning and unsupervised learning.

3. Describe preceptron learning rule and delta learning rule.

4. Write about Hebbian learning and Widrow-Hoft learning rule.

5. Describe winner-take-all learning rule and outstar learning rule.

6. Describe back propagation and features of back propagation.

7. Describe McCulloch-Pitts neuron model in detail.

8. Write about performance of back propagation learning. 9. What are the limitations of back propagation learning? Explain in detail.

9. Discuss a few tasks that can be performed by a back propagation network.

10. Distinguish between hop field continuous and discrete models.

11. Bring out the salient features of boltzman machine.

12. What is meant by converter propagation? Explain briefly.

13. Explain briefly the back propagation technique.

14. Explain how the ANN can be used for process identification with neat sketch.

15. Discuss the step by step procedure of back propagation learning algorithm in detail.

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17. Explain the transient response of continuous time networks.

18. Explain the feedback networks of ANN for controlling process.

19. Explain how ANN can be used for neuro controller for inverted pendulum.

20. Differentiate fuzzy set from classical set and name the properties of classical (crisp) sets.

FUZZY LOGIC AND NEURAL NETWORKS ASSIGNMENT 4

Q.1 Explain how Fuzzy Neural Networks are organized.

a. Explain Fuzzy Information Retrieval methods

b. How do fuzzy databases differ from conventional databases?

Q 2. Explain the role of neural network in fuzzy controller.

Q.3. Explain the working of fuzzy controller with block diagram.

Q4. Explain how fuzzy neural networks are organized.

Q5. Explain different pattern recognition methods in detail.

Q6. Explain the concept of fuzzy in image processing techniques.

Q7. Explain different fuzzy clustering algorithms.

Q7. Explain different operation in fuzzy database .