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| Started on | Thursday, 6 February 2025, 8:17 PM |
| State | Finished |
| Completed on | Thursday, 6 February 2025, 8:22 PM |
| Time taken | 5 mins 20 secs |
| Marks | 10.00/10.00 |
| Grade | **100.00** out of 100.00 |

## Question 1

1.00/1.00

Which activation function outputs a value between 0 and 1?

- Rectified Linear Unit (ReLU)
- Leaky ReLU
- Hyperbolic Tangent (tanh)
- Sigmoid✔
- Linear

The correct answer is: Sigmoid

## Question 2

1.00/1.00

In the context of neural networks, what does the term "backpropagation" refer to?

- The method of adjusting weights based on the error✔
- The process of adding more layers
- The activation of neurons in the hidden layer
- The forward flow of data
- The initial random assignment of weights

The correct answer is: The method of adjusting weights based on the error

## Question 3

1.00/1.00

Which application of ML is used to group similar items?

- Clustering✔
- Classification
- Ranking
- Regression
- Recommendation

The correct answer is: Clustering

## Question 4

1.00/1.00

Which of the following is a technique to prevent overfitting in neural networks?

- Gradient Clipping
- Using a larger dataset
- Increasing the number of layers
- Dropout✔
- Learning Rate Adjustment

The correct answer is: Dropout

## Question 5

1.00/1.00

Which of the following is NOT a type of machine learning?

- Unsupervised Learning
- Supervised Learning
- Reinforcement Learning
- Recursive Learning✔
- Semi-supervised Learning

The correct answer is: Recursive Learning

## Question 6

1.00/1.00

What is the main difference between regression and classification?

- Regression is unsupervised
- Regression uses labeled data, Classification doesn't
- Both are the same
- Regression predicts a continuous output, Classification predicts a discrete label✔
- Classification is unsupervised

The correct answer is: Regression predicts a continuous output, Classification predicts a discrete label

## Question 7

1.00/1.00

What is the primary goal of machine learning?

- To allow computers to learn from data✔
- To program explicit rules for a task
- None of the given options
- To increase computational speed
- To design new algorithms

The correct answer is: To allow computers to learn from data

## Question 8

1.00/1.00

Which of the following is NOT a common machine learning algorithm?

- Decision Trees
- K-Means Clustering
- Neural Networks
- Quantum Entanglement✔
- Support Vector Machines

The correct answer is: Quantum Entanglement

## Question 9

1.00/1.00

Which component of a neural network is responsible for combining inputs and passing them to the next layer?

- Weight
- Bias
- Activation Function
- Layer
- Neuron (or Node)✔

The correct answer is: Neuron (or Node)

## Question 10

1.00/1.00

What is the primary purpose of a loss function in training neural networks?

- To quantify the difference between predicted and actual values✔
- To activate neurons
- To define the network's architecture
- To initialize weights
- To speed up training

The correct answer is: To quantify the difference between predicted and actual values