Here are 10 MCQs about Machine Learning in markdown format:

1. Which of the following machine learning tasks is used to predict a continuous output variable?

   A. Classification B. Regression C. Clustering D. Dimensionality Reduction

2. What type of machine learning algorithm learns from labeled data?

   A. Unsupervised Learning B. Reinforcement Learning C. Semi-Supervised Learning D. Supervised Learning

3. Which of the following is NOT a common evaluation metric for classification problems?

   A. Accuracy B. Precision C. Recall D. Mean Squared Error

4. What is the purpose of feature scaling in machine learning?

   A. To increase the dimensionality of the data B. To reduce overfitting C. To ensure features contribute equally to the model D. To handle missing values

5. Which algorithm is best suited for grouping data points into clusters based on similarity?

   A. Linear Regression B. K-Nearest Neighbors C. K-Means Clustering D. Support Vector Machine

6. What is the problem of overfitting in machine learning?

   A. The model is too simple and cannot capture the underlying patterns in the data. B. The model performs well on training data but poorly on unseen data. C. The model is too complex and takes too long to train. D. The model is unable to handle noisy data.

7. Which of the following techniques can be used to reduce overfitting?

   A. Increasing the size of the training dataset B. Increasing model complexity C. Using more features D. Reducing regularization

8. Which of the following is an example of unsupervised learning algorithm?

   A. Logistic Regression B. Decision Tree C. Principal Component Analysis (PCA) D. Support Vector Machine (SVM)

9. What is the role of a validation set in machine learning?

   A. To train the model B. To evaluate the final performance of the model C. To tune hyperparameters and prevent overfitting during training D. To deploy the model to production

10. Which of the following algorithms is a type of ensemble learning method?

    A. Linear Regression B. K-Means Clustering C. Random Forest D. Principal Component Analysis (PCA)

Answer Key:

1. B
2. D
3. D
4. C
5. C
6. B
7. A
8. C
9. C
10. C