**Pre-Assessment-AIML**

**1) Which of the following is a characteristic of Artificial Intelligence (AI)?**

a) ability to learn and adapt

b) ability to replicate human intelligence

c) ability to think and reason

d) all of the above

**2) Which of the following is not a supervised learning algorithm?**

a) linear regression

b) decision trees

c) k-means clustering

d) support vector machines

**3) Which of the following is not a common optimization algorithm used in training neural networks?**

a) gradient descent

b) backpropagation

c) Adam

d) random forest

**4) Which of the following is an example of reinforcement learning?**

a) predicting the price of a house based on its features

b) classifying images of cats and dogs

c) training a robot to play chess

d) detecting fraudulent transactions

**5) Which of the following is not a measure of model performance in classification problems?**

a) precision

b) recall

c) accuracy

d) R-squared

**6) Which of the following is not a disadvantage of using neural networks?**

a) black box nature

b) slow training time

c) overfitting

d) easy interpretation of results

**7) Which of the following is not a component of Natural Language Processing (NLP)?**

a) morphological analysis

b) sentiment analysis

c) syntactic analysis

d) rule-based reasoning

**8) Which of the following is not a type of clustering algorithm?**

a) k-means clustering

b) hierarchical clustering

c) expectation-maximization clustering

d) decision tree clustering

**9) Which of the following is not a type of machine learning?**

a) supervised learning

b) unsupervised learning

c) reinforcement learning

d) reactive learning

**10) Which of the following is not a common approach to feature selection in machine learning?**

a) filter methods

b) wrapper methods

c) dimensionality reduction

d) polynomial regression