1. What is machine learning?
    a. Methodology for creating computer games
    b. Process of teaching computers about network protocols
    c. **Development of algorithms that identify patterns in data**
    d. Using computers to perform complex mathematical calculations

2. Which of the following is not a machine learning task?

    a. Image classification
    b. **Network security audit**
    c. Time series forecasting
    d. Customer clustering

3. Which of the following is an example of supervised learning?

    a. Regression
    b. Clustering
    c. Dimensionality reduction
    d. Image generation

4. What is the purpose of a loss function in machine learning?

    a. Maximize the number of model parameters
    b. **Minimize model errors**
    c. Define the data structure
    d. Increase the learning rate

5. What is a model in the context of machine learning?

    a. Bidirectional data storage network
    b. Algorithm used for data cleaning
    c. **Statistical representation of data for making predictions**
    d. Visual representation of data analysis results

6. In machine learning, optimization algorithms are used to:

a. Boost input data throughput
b. Maximize the loss function
c. **Find the optimal model parameters**
d. Improve image quality

7. What is the first step of resolving a machine learning problem?

a. Model training
b. **Analyzing the business task and identifying data sources**
c. Data cleaning
d. Maintaining the model

8. Preparation of data for machine learning involves:

a. Testing models
b. Distributing data for analysis
c. Data labeling
d. **Data cleaning and exploratory data analysis**

9. What stage follows model training?

a. Collecting data
b. Optimizing the loss function
c. **Testing and deploying the model for predictions**
d. Calculating the data scale

10 .It's important to maintain a deployed model to:

a. Increase the volume of training data
b. **Ensure that the model remains sufficiently accurate over time**
c. Continuously increase the model size
d. Reduce the request processing time