MCQ Practice for Linear Regression Exam

1. Linear Regression is a type of:

A) Unsupervised learning

B) Reinforcement learning

C) Supervised learning

D) Deep learning

Answer: C) Supervised learning

2. The primary goal of linear regression is to:

A) Classify the data into categories

B) Maximize the accuracy score

C) Minimize the cost function

D) Maximize the loss

Answer: C) Minimize the cost function

3. What is the shape of the hypothesis function in simple linear regression?

A) A curve

B) A plane

C) A straight line

D) A step function

Answer: C) A straight line

4. What is the cost function commonly used in linear regression?

A) Cross-entropy

B) Hinge loss

C) Mean squared error

D) Absolute error

Answer: C) Mean squared error

5. What does gradient descent do in linear regression?

A) Finds the maximum value of the cost function

B) Randomly guesses the model weights

C) Minimizes the cost function by updating weights

D) Performs feature scaling

Answer: C) Minimizes the cost function by updating weights

6. Which method gives an exact solution for linear regression without iterations?

A) Gradient descent

B) Normal equation

C) Polynomial regression

D) Logistic regression

Answer: B) Normal equation

7. What is overfitting in linear regression?

A) Model too simple to capture data patterns

B) Model performs well on both training and test data

C) Model performs well on training but poorly on test data

D) Model with zero cost function

Answer: C) Model performs well on training but poorly on test data

8. Polynomial regression is used when:

A) Data has only one feature

B) Relationship between variables is nonlinear

C) We use categorical output

D) We use more than one output variable

Answer: B) Relationship between variables is nonlinear

9. L1 Regularization is also known as:

A) Ridge Regression

B) Logistic Regression

C) Lasso Regression

D) Linear Regression

Answer: C) Lasso Regression

10. Which of the following is a challenge in linear regression?

A) Learning rate

B) Feature scaling

C) Overfitting and underfitting

D) All of the above

Answer: D) All of the above