In Q1 to Q11, only one option is correct, choose the correct option:

1. Which of the following methods do we use to find the best fit line for data in Linear Regression?
A) Least Square Error

2. Which of the following statement is true about outliers in linear regression?
A) Linear regression is sensitive to outliers

3. A-line falls from left to right if a slope is _____?
B) Negative

4. Which of the following will have symmetric relation between the dependent variable and independent variable?
B) Correlation

5. Which of the following is the reason for the overfitting condition?
C) Low bias and high variance

6. If output involves label then that model is called as:
A) Descriptive model

7. Lasso and Ridge regression techniques belong to _____?
A) Cross-validation

8. To overcome with imbalance dataset which technique can be used?
D) SMOTE

9. The AUC Receiver Operator Characteristic (AUCROC) curve is an evaluation metric for binary classification problems. It uses _____ to make a graph?
A) TPR and FPR

10. In AUC Receiver Operator Characteristic (AUCROC) curve for the better model area under the curve should be less.
B) False

11. Pick the feature extraction from below:
B) Apply PCA to project high dimensional data

Which of the following is true about Normal Equation used to compute the coefficient of the Linear Regression?
A) We don't have to choose the learning rate.
B) It becomes slow when number of features is very large.

13. Explain the term regularization?
Regularization means to make things regular or acceptable. This is the reason we use it for applied machine learning. Regularization is the process that regularizes or shrinks the coefficients towards zero. Regularization prevents learning a more complex or flexible model, to prevent overfitting.

14. Which algorithms are used for regularization?
There are two main regularization techniques, namely Ridge Regression and Lasso Regression. They both differ in the way they assign a penalty to the coefficients. Ridge modifies the RSS by adding the penalty (shrinkage quantity) equivalent to the square of the magnitude of coefficients. Lasso Regression modifies the RSS by adding the penalty (shrinkage quantity) equivalent to the sum of the absolute value of coefficients.

15. Explain the term error present in the linear regression equation?
It is also known as Mean Squared Error MSE. It is an estimator that measures the squares of average error. Mainly, the average squared difference between the estimated values and true value.