MACHINE LEARNING

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

2. Which of the following statement is true about outliers in linear regression?
   Answer :- (B) linear regression is not sensitive to outliers

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

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

5. Which of the following is the reason for over fitting condition?
   Answer :- (C) Low bias and high variance

6. If output involves label then that model is called as:
   Answer :- (B) Predictive modal

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

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

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

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

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

12. Which of the following is true about Normal Equation used to compute the coefficient of the Linear Regression?
    Answer :- A) We don't have to choose the learning rate.
    B) It becomes slow when number of features is very large.
    D) It does not make use of dependent variable.

13. Explain the term regularization?
    Answer :- Regularization refers to techniques that are used to calibrate machine learning models in order to minimize the adjusted loss function and prevent overfitting or underfitting. Using Regularization, we can fit our machine learning model appropriately on a given test set and hence reduce the errors in it. There are two types of regularization techniques :-
    Ridge regularization
    Lasso regularization

14. Which particular algorithms are used for regularization?
    Answer :- . There are two types of regularization techniques :-
    Ridge(L0) regularization :- It modifies the over-fitted or under fitted models by adding the penalty equivalent to the sum of the squares of the magnitude of coefficients.
    Lasso(L1) regularization :- It modifies the over-fitted or under-fitted models by adding the penalty equivalent to the sum of the absolute values of coefficients.

15. Explain the term error present in linear regression equation?
    Answer :- The entire variance in the dependent variable that is not explained by the weighted independent variables is represented by the error term in a regression equation. The formula for a straight line, or more specifically, the line that fits a scatterplot of data the best, is called a regression equation. The extent to which they are not on the regression line, which reflects error, is what the error term describes. If there were no error, all the data points would be on the regression line.