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 dependent variable and independent variable?**
   B) Correlation

5. **Which of the following is the reason for over fitting condition?**
   B) Low bias and low variance

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

7. **Lasso and Ridge regression techniques belong to _____?**
   D) Regularization

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

9. **The AUC Receiver Operator Characteristic (AUCROC) curve is an evaluation metric for binary classification problems. It uses _____ to make 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

12. **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.
    C) We need to iterate

13. **Explain the term regularization?**
    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.

14. Which particular algorithms are used for regularization?

There are two main types of algorithms: - Ridge Regularization and Lasso Regularization

Ridge 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. This means that the mathematical function representing our machine learning model is minimized and coefficients are calculated. The magnitude of coefficients is squared and added. Ridge Regression performs regularization by shrinking the coefficients present.

Lasso Regularization: - It modifies the over-fitted or under-fitted models by adding the penalty equivalent to the sum of the absolute values of coefficients. Lasso regression also performs coefficient minimization, but instead of squaring the magnitudes of the coefficients, it takes the true values of coefficients. This means that the coefficient sum can also be 0, because of the presence of negative coefficients.

15. Explain the term error present in linear regression equation?

The error term of a regression equation represents all of the variation in the dependent variable not explained by the weighted independent variables.A regression equation is the formula for a straight line — in this case, the best-fit line through a scatterplot of data. If there were no error, all the data points would be located on the regression line; to the extent they are not represents error; this is what the error term summarizes**.**