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

ANS: A) Least Square Error

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

3. A line falls from left to right if a slope is _____?

ANS: A) Positive

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

ANS: C) Both of them

5. Which of the following is the reason for over fitting condition?

ANS: C) Low bias and high variance

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

ANS: D) All of the above

7. Lasso and Ridge regression techniques belong to _____?

ANS: D) Regularization

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

ANS: D) SMOTE

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

ANS: A) TPR and FPR

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

ANS: B) False

11. Pick the feature extraction from below:

ANS: 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?

ANS: 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?

ANS : Regularization is a technique used to reduce the errors by fitting the function appropriately on the given training set and avoid over fitting.

14. Which particular algorithms are used for regularization?

ANS:

- Ridge Regression
- LASSO (Least Absolute Shrinkage and Selection Operator) Regression
- Elastic-Net Regression

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

ANS: An error term represents the margin of error within a statistical model; it refers to the **sum of the deviations** within the **regression line**, which provides an explanation for the difference between the theoretical value of the model and the actual observed results. The regression line is used as a point of analysis when attempting to determine the correlation between one independent variable and one dependent variable.