**MACHINE LEARNING**

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 \_\_\_\_\_\_?

A) Negative Number

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

A) Both Correlation and Regression

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

A) High bias and high variance

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

A) Predictive model

7. Lasso and Ridge regression techniques belong to \_\_\_\_\_\_\_\_\_?

A) Regularization

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

A) 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.

A) True

11. Pick the feature extraction from below:

A) Apply PCA to project high dimensional data

In Q12, more than one options are correct, choose all the correct options:

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.

Q13 and Q15 are subjective answer type questions, Answer them briefly.

13. Explain the term regularization?

A) 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?

A) Ridge Regression, Lasso, Elastic Net Regression

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

A) The error term is the difference between the expected price at a particular time and the price that was actually observed. In instances where the price is exactly what was anticipated at a particular time, the price will fall on the trend line and the error term will be zero.