MACHINE LEARNING

1. Option A- Least square Error
2. Option A- Linear regression is sensitive to outliers
3. Option B- Negative
4. Option C – Both of them
5. Option C- Low Bias and High variance
6. Option A- Descriptive model
7. Option D- Regularization
8. Option D- SMOTE
9. Option A- TPR and FPR
10. Option A- True
11. Option A - Construction bag of words from a email
12. Option A, B and C- 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?

Ans- Regularization helps to solve over fitting problem in machine learning. Simple model will be a very poor generalization of data. At the same time, complex model may not perform well in test data due to over fitting. We need to choose the right model in between simple and complex model.

14. Which particular algorithms are used for regularization?

Ans- Ridge Regression.

LASSO (Least Absolute Shrinkage and Selection Operator) Regression.

1)Ridge Regression- Unlike standard linear regression, which minimizes the sum of squared errors, ridge regression also includes a penalty term that minimizes the sum of squared coefficients. This penalty term is known as the alpha value.

2)LASSO- In Python, Lasso regression can be performed using the Lasso class from the sklearn. linear model library. The Lasso class takes in a parameter called alpha which represents the strength of the regularization term. A higher alpha value results in a stronger penalty, and therefore fewer features being used in the model.

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

Ans- Within a linear regression model tracking a stock's price over time, the error term is the difference between the expected price at a particular time and the price that was observed.