**MACHINE LEARNING - 2**

1. A) Least Square Error
2. A) Linear regression is sensitive to outliers
3. A) Positive
4. C) Both of them
5. C) Low bias and high variance
6. B) Predictive model
7. D) Regularization
8. D) SMOTE
9. A) TPR and FPR
10. B) False
11. B) Apply PCA to project high dimensional data
12. A,B,C
13. Regularization is a form of regression that constrains the coefficients estimates towards zero.Regularization helps to reduce the variance for the model, without a substantial increase in the bias. If there is variance in the model that means that the model won’t fit well for data set different than training data. It normalizes and moderates weights attached to a feature, this helps to avoid the problem of overfitting.

1. Types of Regularization:
2. LASSO (Least Absolute Shrinkage and selection operator)Regression (L1 form) : LASSO regression penalizes the model based on the sum of magnitude of the coefficients. Lassocv will return best alpha after max iteration.
3. Ridge Regression (L2 form) : Ridge Regression penalizes the model based on the sum of squares of magnitude of the coefficients. Ridgecv will return best alpha and coefficients after performing 10 cross validations.
4. Error is the difference between the predicted value and the actual value.