Q.1 d) Both A and B

Q.2 a) Linear regression is sensitive to outliers

Q.3 b) Negative

Q.4 c) Both of them

Q.5 c) Low bias and high variance

Q.6 a) Descriptive model

Q.7 d) Regularization

Q.8 d) SMOTE

Q.9 a) TPR and FPR

Q.10 b) False

Q.11 a) Construction bag of words from an email

Q.12 b) It becomes slow when the number of features is very large.

Q.13 Regularization is a technique used in machine learning models in order prevent overfitting and underfitting and improve the generalization performance of models. It leads to better performance on both testing and training data.

Q.14 There are 3 main regularization techniques:

a) Ridge Regression (L2 Regularization) : When using this technique, we add the sum of weight's square to a loss function and thus create a new loss function.

b) Lasso Regression (L1 Regularization) : Lasso has the property of shrinking some coefficients to exactly zero, effectively performing feature selection.

c) Dropout : Dropout is a regularization technique used in neural networks. It prevents complex co-adaptations from other neurons.

Q.15 The term error in linear regression refers to the difference between the predicted values generated by regression equation and the actual observed values in the dataset.