Q1. A. Least Square Error

Q2. A. Linear regression is sensitive to outliers

Q3. B. Negative

Q4. B. Correlation

Q5. C. Low bias and high variance

Q6. B. Predictive model

Q7. D. Regularization

Q8. D. SMOTE

Q9. A. TPR and FPR

Q10. B. False

Q11. B. Apply PCA to project high dimensional data

Q12. A. We don't have to choose the learning rate.

B. It becomes slow when number of features is very large.

Q13. Regularization is basically a method in machine learning which is used to reduce errors by fitting the function appropriately on the given training data set so as to avoid overfitting. It normalizes and moderates weights attached to a feature so that the model do not rely on just a few features to predict the result.

Q14. Algorithms that are used for regularization are:

1. **Lasso Regression :** It adds a penalty to the error function. The penalty is the sum of absolute values of the weights.
2. **Ridge Regression :** It adds a penalty to the error function. The penalty is the sum of the squared values of the weights.
3. **Dropout :** It works by randomly setting the outgoing edges of hidden units to zero at each update of the training phase.

Q15. In linear regression, the term error represents the distance between the most fit line and the observed values i.e. it is abs(model estimate - observed value).