1. A) Least Square Error
2. A) Linear regression is sensitive to outliers
3. B) Negative
4. B) Correlation
5. C) Low bias and high variance
6. B) Predictive modal
7. D) Regularization
8. A) Cross validation
9. A) TPR and FPR
10. B) False
11. ACDB
12. B) It becomes slow when number of features is very large.
13. Regularization refers to techniques that are used to calibrate machine learning models in order to minimize the adjusted loss function and prevent overfitting or underfitting.
Regularization Techniques
There are two main types of regularization techniques: Ridge Regularization and Lasso Regularization.

14. Regularization Algorithms

    Ridge regression – Its purpose is to overcome problems such as data overfitting and multicollinearity in data. When there is considerable collinearity (the existence of near-linear connections among the independent variables) among the feature variables, a typical linear or polynomial regression model will fail. Ridge Regression adjusts the variables by a modest squared bias factor. The feature variable coefficients are pulled away from this rigidity by such a squared bias factor, providing a little bit of bias into the model but considerably lowering variation.

    LASSO – It simply penalizes large coefficients, in contrast to Ridge Regression. When the hyperparameter is big enough, Lasso has the effect of driving certain coefficient estimations to be absolutely zero. As a result, Lasso conducts variable selection, resulting in models that are significantly easier to read than Ridge Regression models. In a nutshell, it's about lowering variability and increasing the accuracy of linear regression models.

15. An error term represents the margin of error within a statistical model; it refers to the sum of the deviations within the regression line, which provides an explanation for the difference between the theoretical value of the model and the actual observed results. The regression line is used as a point of analysis when attempting to determine the correlation between one independent variable and one dependent variable.