MACHINE LEARNING

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. A. Descriptive
7. D. Regularization
8. C. SMOTE
9. D. Recall and precision
10. B. False
11. D. Forward Selection
12. A, B, C

13. Regularization refers to techniques that are used to prevent overfitting in models. Overfitting occurs when a model learns the training data too well, capturing noise and small variations in the data that don't generalize well to new, unseen data. Regularization methods add a penalty term to the model's loss function, encouraging it to find a simpler and more generalized solution by discouraging extreme parameter values. This helps to improve the model's ability to make accurate predictions on new data.

14. Ridge Regression, LASSO Regression, Elastic-Net Regression.

15. The term "error" in the context of a linear regression equation refers to the difference between the actual observed data points and the values predicted by the linear regression model. It quantifies how well the model's predictions match the real data. Minimizing these errors is the primary goal of linear regression, and it's achieved by adjusting the model's parameters to find the line that best fits the data points, reducing the difference between predicted and actual values.