MACHINE LEARNING

1)D

2)A

3)B

4)B

5)C

6)B

7)D

8)D

9)A

10)B

11)B

12)A,B

13) Regularization is a technique used in machine learning and statistical modeling to prevent overfitting by adding a penalty to the model's complexity. Overfitting occurs when a model learns not only the underlying pattern in the training data but also the noise, leading to poor generalization to new, unseen data. Regularization helps in preventing overfitting and improve model generalization. Regularization is crucial in machine learning for managing model complexity, ensuring better performance on unseen data, and making the model more interpretable by preventing overfitting

14) There are a lot of different regularization techniques. The most common approaches rely on statistical methods such as lasso regularization, ridge regularization and elastic net regularization, which combines both Lasso and Ridge techniques. Various other regulation techniques use different principles, such as ensembling, neural network dropout, pruning decision tree-based models and data augmentation.

15) In linear regression, 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.