

## ANSWERS FOR MACHINE LEARNING ASSIGNMENT:

- 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.C) Reinforcement learning
- 7.D) Regularization
- 8.A) Cross validation
- 9.A) TPR and FPR
- 10.B) False
- 11.B) Apply PCA to project high dimensional data
- 12.A) We don't have to choose the learning rate. B) It becomes slow when the number of features is very large. C) We need to iterate.
13. Sometimes, when we use regression models to train a data, there are chances that the model becomes overfitting. Regularization helps us to find if a model is overfitting and also to solve this overfitting problem by adding shrinkage penalty to cost function.
- 14.Lasso (L1 form), Ridge (L2 form) and Elasticnet ( least popular)
- 15.Linear regression often uses mean-square error (MSE) to calculate the error of the model. MSE is calculated by measuring the distance of the observed y-values from the predicted y-values at each value of x, calculating the mean of each of the squared distances.