# MACHINE LEARNING – WORKSHEET 3

**Q1 to Q15 are subjective answer type questions, Answer them briefly.**

1. Give short description each of Linear, RBF, Polynomial kernels used in SVM.
2. R-squared or Residual Sum of Squares (RSS) which one of these two is a better measure of goodness of fit of model in regression and why??
3. What are TSS (Total Sum of Squares), ESS (Explained Sum of Squares) and RSS (Residual Sum of Squares) in regression. Also mention the equation relating these three metrics with each other.
4. What is Gini –impurity index?
5. Are unregularized decision-trees prone to overfitting? If yes, why?
6. What is an ensemble technique in machine learning?
7. What is the difference between Bagging and Boosting techniques?
8. what is out-of-bag error in random forests?
9. What is K-fold cross-validation?
10. What is hyper parameter tuning in machine learning and why it is done?
11. What issues can occur if we have a large learning rate in Gradient Descent?
12. What is bias-variance trade off in machine learning?
13. What is the need of regularization in machine learning?
14. Differentiate between Adaboost and Gradient Boosting
15. Can we use Logistic Regression for classification of Non-Linear Data? If not, why?