

## Machine Learning Assignment-1

**Only one option is correct, choose the correct option:**

1. A) Least Square Error
2. A) Linear regression is sensitive to outliers
3. B) Negative
4. C) Both of them
5. C) Low bias and high variance
6. A) Descriptive model
7. D) Regularization
8. A) Cross validation
9. C) Sensitivity and Specificity
10. A) True
11. A) Construction bag of words from a email

**More than one options are correct, choose all the correct options:**

12. A) We don't have to choose the learning rate.  
B) It becomes slow when number of features is very large.

**Subjective answer type questions, Answer them briefly.**

13.

- In general, regularization means to make things regular or acceptable.
- In the context of machine learning, regularization is the process which regularizes or shrinks the coefficients towards zero. In simple words, regularization discourages learning a more complex or flexible model, to prevent overfitting.

14.

There are three main regularization techniques, namely:

- Ridge Regression (L2 Norm)
- Lasso (L1 Norm)
- Dropout

15.

Considering a linear regression on stock's price,

Within a linear regression model tracking a stock's price over time, the error term is the difference between the expected price at a particular time and the price that was actually observed.