Machine Learning

Answer 1: The computational complexity of linear regression is
B) $O(n)$

Answer 2: Which of the following can be used to fit non-linear data
B) Logistic Regression

Answer 3: Which of the following can be used to optimize the cost function of Linear Regression?
B) Gradient Descent

Answer 4: Which of the following method does not have closed form solution for its coefficients?
C) Lasso

Answer 5: Which gradient descent algorithm always gives optimal solution?
D) All of the above

Answer 6: Generalization error measures how well a model performs on training data.
A) True

Answer 7: The cost function of linear regression can be given as $J(w0, w1) = 1\ 2m \sum (w0 + w1x\ (i) - y\ (i)\ )\ m\ 2\ i=1$. The half term at start is due to:
D) None of the above.

Answer 8: Which of the following will have symmetric relation between dependent variable and independent variable?

Answer 9: Which of the following is true about Normal Equation used to compute the coefficient of the Linear Regression?
D) It does not make use of dependent variable.

Answer 10: Which of the following statement/s are true if we generated data with the help of polynomial features with 5 degrees of freedom which perfectly fits the data?
B) Linear Regression will have low bias and high variance.

Answer 11: Which of the following sentence is false regarding regression?
B) It is used for prediction.
A) It relates inputs to outputs.

Q12: Which Linear Regression training algorithm can we use if we have a training set with millions of features?
Answer12: You could use batch gradient descent, stochastic gradient descent, or mini-batch gradient descent.

Q13: Which algorithms will not suffer or might suffer, if the features in training set have very different scales
Answer 13: Scaling/Normalization is done in order to reduce the distance between data points when we intuitively visualize them in a multidimensional space. Such a distance reduction will be helpful in many techniques that use distances between data points (Euclidean, Manhattan, etc.) like regression, classification (except naive Bayes), clustering, PCA, LDA, etc.

PYTHON – WORKSHEET 1

Answer 1: Which of the following operators is used to calculate remainder in a division?

(C) %

Answer 2: In python 2//3 is equal to?

B) 0

Answer 3: In python, 6<<2 is equal to?

(C) 24

Answer 4: In python, 6&2 will give which of the following as output?

A) 2

Answer 5: In python, 6|2 will give which of the following as output?

D) 6

Answer 6: What does the finally keyword denotes in python?

D) None of the above

Answer 7: What does raise keyword is used for in python?

A) It is used to raise an exception.