Assignment 2 for DS2311

Question 1. When implementing linear regression of some dependent variable y on the set of independent
variables $\mathbf{x} = (x_1, \ldots, x_r)$, where r is the number of predictors, which of the following statements will
be true?

Answer: D

Question 2: What indicates that you have a ***perfect fit*** in linear regression?

Answer: D

Question 3: In simple linear regression, the value of ***what*** shows the point where the estimated regression line
crosses the y axis?

Answer: B

Question 4: Check out these four linear regression plots:
Which one represents an ***underfitted*** model?

Answer: B

Question 5: There are five basic steps when you're implementing linear regression:

- ***a.*** Check the results of model fitting to know whether the model is satisfactory.
- ***b.*** Provide data to work with, and eventually do appropriate transformations.
- ***c.*** Apply the model for predictions.
- ***d.*** Import the packages and classes that you need.
- ***e.*** Create a regression model and fit it with existing data.

However, those steps are currently listed in the wrong order. What's the correct order?

Answer: B

Question 6: Which of the following are optional parameters to LinearRegression in scikit-learn?

Answer : B C D E

Question 7: While working with scikit-learn, in which type of regression do you need to transform the array of
inputs to include nonlinear terms such as x^2?

Answer : C

Question 8 : You should choose statsmodels over scikit-learn when:

Answer: B

Question 9 : _____ is a fundamental package for scientific computing with Python. It offers
comprehensive mathematical functions, random number generators, linear algebra routines, Fourier
transforms, and more. It provides a high-level syntax that makes it accessible and productive.

Answer: B

Question 10: _____ is a Python data visualization library based on Matplotlib. It provides a high-level
interface for drawing attractive and informative statistical graphics that allow you to explore and
understand your data. It integrates closely with pandas data structures.

Answer: B

Question 11: Among the following identify the one in which dimensionality reduction reduces.

Answer: D

Question 12 : Which of the following machine learning algorithm is based upon the idea of bagging?

Answer: B

Question 13. Choose a disadvantage of decision trees among the following.

Answer: C

Question 14. What is the term known as on which the machine learning algorithms build a model based on
sample data?

Answer: A & C

Question 15. Which of the following machine learning techniques helps in detecting the outliers in data?

Answer: C

Question 16. Identify the incorrect numerical functions in the various function representation of machine
learning.

Answer: C

Question 17. Analysis of ML algorithm needs

Answer: D

Question 18. Identify the difficulties with the k-nearest neighbor algorithm.

Answer: C

Question 19. The total types of the layer in radial basis function neural networks is _____

Answer: C

Question 20. Which of the following is not a supervised learning

Answer: D