Assignment on MCQ

Q.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: A) $\beta_0, \beta_1, \ldots, \beta_r$ are the regression coefficients.

Q.2] What indicates that you have a perfect fit in linear regression?

Answer: D) The value $R^2 = 1$, which corresponds to SSR = 0

Q.3] In simple linear regression, the value of what shows the point where the estimated regression line crosses the y axis?

Answer: B) B0

Q.4] Check out these four linear regression plots.

Which one represents an underfitted model?

Answer: D) The top-left plot

Q.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: D) d, b, e, a, c

Q.6] Which of the following are optional parameters to LinearRegression in scikit-learn?

Answer: B) fit_intercept **C**) normalize **D**) copy_X **E**) n_jobs **F**) reshape

Q.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) Polynomial regression

Q.8] You should choose statsmodels over scikit-learn when:

Answer: C) You need more detailed results.

Q.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) Numpy

Q.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) Seaborn

Q.11] Among the following identify the one in which dimensionality reduction reduces.

Answer: D) Collinearity

Q.12] Which of the following machine learning algorithm is based upon the idea of bagging?

Answer: B) Random Forest

Q.13] Choose a disadvantage of decision trees among the following.

Answer: C) Decision Tree are prone to overfit

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

Answer: C) Training data

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

Answer: C) Anamoly detection

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

Answer: C) Case based

Q.17] Analysis of ML algorithm needs

Answer: D) Both a and b

Q.18] Identify the difficulties with the k-nearest neighbor algorithm.

Answer: C) Both a and b

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

Answer: C) 3

Q.20] Which of the following is not a supervised learning

Answer: A) PCA