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

ANS.)d) Both and b

22.)What indicates that you have a perfect fit in linear regression?

ANS)d) The value $R^2 = 1$, which corresponds to SSR = 0

23.)In simple linear regression, the value of what shows the point where the estimated regression line crosses the y axis?

ANS)b) B0

24.)Check out these four linear regression plots:

Which one represents an underfitted model

ANS.) d) The top-left plot

25)

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?

ANS.) d) - b) - e) - a) - c)

26) Which of the following are optional parameters to LinearRegression in scikit-learn?

ANS.)b) fit_intercept

c) normalize

d) copy_X

e) n_jobs

27) 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?

ANS.)c) Polynomial regression

28) You should choose statsmodels over scikit-learn when:

ANS.)c) You need more detailed results.

29) _____ 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.

ANS.)b) Numpy

30) _____ 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.

ANS.)SEABORN