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

Answer: Option d) a) and b) both

22 What indicates that you have a **perfect fit** in linear regression?
Answer :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?
Answer : b) B0

24 Answer : d)

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.
Answer : d) d,b,e,a,c

26 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

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?
a)Multiple linear regression
b) Simple linear regression
c) Polynomial regression

28) You should choose statsmodels over scikit-learn when:
A)You want graphical representations of your data.
b) You're working with nonlinear terms.
c) You need more detailed results.
d) You need to include optional parameters.

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.
Answer
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.

Answer : b) Seaborn

41)
Among the following identify the one in which dimensionality reduction reduces.

Answer : d) Collinearity

42) Which of the following machine learning algorithm is based upon the idea of bagging?
Answer :b) Random Forest

43) Choose a disadvantage of decision trees among the following.
Answer : a) Decision tree robust to outliers

44)
What is the term known as on which the machine learning algorithms build a model based on sample data?
Answer : c) Training data

45)
Which of the following machine learning techniques helps in detecting the outliers in data?

Answer : c) Anamoly detection

46 Identify the incorrect numerical functions in the various function representation of machine learning.
Answer : a) Support Vector
b) Regression

47)
Analysis of ML algorithm needs
a) Statistical learning theory
b) Computational learning theory
c) None of the above
Answer : d) Both a and b

48)
Identify the difficulties with the k-nearest neighbor algorithm.
a) Curse of dimensionality
b) Calculate the distance of test case for all training cases
c) Both a and b
d) None

Answer: c) Both a and b

49)
The total types of the layer in radial basis function neural networks is _____

Answer : c) 3

50
Which of the following is not a supervised learning
Answer : a) PCA