

ANSWERS

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

Answer: D). Both a and b

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) B_0

24. Check out these four linear regression plots:

Which one represents an underfitted model?

Answer: d) The top-left plot

25. There are five basic steps when you're implementing linear regression:

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

26. Which of the following are optional parameters to Linear Regression in scikit-learn?

Answer: 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 ?

Answer: c) Polynomial regression

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

Answer: 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: c) Decision Tree are prone to overfit.

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) Anomaly detection

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

Answer: c) Case based

47. Analysis of ML algorithm needs:

Answer: d) Both a and b (Statistical learning theory & Computational learning theory)

48. Identify the difficulties with the k-nearest neighbour algorithm.

Answer: C) Both a and b (Curse of dimensionality and calculating the distance of test case for all training cases).

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

Answer: b) 2

50. Which of the following is not a supervised learning.

Answer: d) KMeans