

1. What will be the output of the following code snippet? `def func(a, b): return b if a == 0 else func(b % a, a) print(func(30, 75))`

Ans. C-15

2. `numbers = (4, 7, 19, 2, 89, 45, 72, 22) sorted_numbers = sorted(numbers) even = lambda a: a % 2 == 0 even_numbers = filter(even, sorted_numbers) print(type(even_numbers))`

Ans. Filter

3. As what datatype are the `*args` stored, when passed into

Ans. Tuple

4. `set1 = {14, 3, 55} set2 = {82, 49, 62} set3={99,22,17} print(len(set1 + set2 + set3))`

Ans. Error

5. What keyword is used in Python to raise exceptions?

Ans. Raise

6. Which of the following modules need to be imported to handle date time computations in Python?

Ans. Datetime

7. What will be the output of the following code snippet? `print(4**3 + (7 + 5)**(1 + 1))`

Ans.208

8. Which of the following functions converts date to corresponding time in Python

Ans. `strptime()`

9. The python tuple is _____ in nature

Ans. immutable

10. The ____ is a built-in function that returns a range object that consists series of integer numbers, which we can iterate using a for loop

Ans. `range()`

11. Amongst which of the following is a function which does not have any name

Ans. Lambda function

12. The module Pickle is used to ____

Ans. Both A and B

13. Amongst which of the following is / are the method of convert Python objects for writing data in a binary file?

Ans. dump() method

14. Amongst which of the following is / are the method used to unpickling data from a binary file

Ans. load()

15. A text file contains only textual information consisting of ____.

Ans. All of the mentioned above

16. Which Python code could replace the ellipsis (...) below to get the following output? (Select all that apply.)

Ans. both a and b

17. Which of the following lines of code will create an empty dictionary named captains

Ans. captions={}

18. Now you have your empty dictionary named captains. It's time to add some data! Specifically, you want to add the key-value pairs "Enterprise": "Picard", "Voyager": "Janeway", and "Defiant": "Sisko". Which of the following code snippets will successfully add these key-value pairs to the existing captains dictionary?

Ans. captains = {"Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko",

19. You're really building out the Federation Starfleet now! Here's what you have

Ans. for ship, captain in captains.items(): print(f"The{ship} is captained by {captain}.")

20. You've created a dictionary, added data, checked for the existence of keys, and iterated over it with a for loop. Now you're ready to delete a key from this dictionary

Ans. `del captains["Discovery"]`

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?

Ans. Both a and b

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

Ans. 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_0

24. Check out these four linear regression plots

Ans. The top-left plot

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

Ans. d, b, e, a, c

26. Which of the following are optional parameters to `LinearRegression` in `scikit-learn`

Ans. `fit_intercept`. `Normalize`. `copy_X`. `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. Polynomial regression

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

Ans. 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. 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