Day-3 Quiz-DataScience-Training

Welcome to the Python Programming Quiz! This quiz tests your knowledge of Python, focusing on collection objects, functions, modules, libraries, and oops. Please read the instructions carefully before starting the quiz.

Instructions and Rules

- **Time Limit:** You have 20 minutes to complete the quiz.
- **Number of Questions:** The quiz consists of 20 multiple-choice questions.
- **Scoring:** Each correct answer is worth 1 point. There is no negative marking for incorrect answers.
- **Single Attempt:** You are allowed only one attempt to complete the quiz.
- **Required Fields:** All questions are mandatory. You must answer each question to submit the quiz.
- **Resources:** This is a closed-book quiz. Do not use any external resources, including books, notes, or the internet.
- **Honesty:** Please answer the questions honestly and to the best of your ability. Cheating or dishonesty will result in disqualification.
- **Environment:** Ensure you are in a quiet environment where you can concentrate without interruptions.
- **Technical Issues:** In case of technical issues, please contact the quiz administrator immediately.
- **Retakes:** There are no retake opportunities for this quiz. Ensure you are prepared before starting.

Good luck, and do your best!

* Indicates required question

1. Email *

2. **1. Which of the following is a special method in Python classes?** * 1 point

Mark only one oval.

- A. __init__
- B. __main__
- C. __start__
- D. __self__

3. **2. How do you create a NumPy array from a list?** * 1 point

Mark only one oval.

- A. np.array([1, 2, 3])
- B. np.array(1, 2, 3)
- C. np.array(1; 2; 3)
- D. np.array{1, 2, 3}

4. **3. How do you create a 3x3 identity matrix in NumPy?** * 1 point

Mark only one oval.

- A. np.eye(3)
- B. np.identity(3)
- C. np.ones((3,3))
- D. np.diag(3)

5. **4. What is the output of the following code?** * 1 point

```
import numpy as np
arr = np.array([1, 2, 3, 4, 5])
print(arr * 2)
```

Mark only one oval.

- A. [1, 2, 3, 4, 5, 1, 2, 3, 4, 5]
- B. [2, 4, 6, 8, 10]
- C. [1, 4, 9, 16, 25]
- D. Error

6. **5. What does the np.linspace function do?** * 1 point

Mark only one oval.

- A. Creates an array of equally spaced values within a specified range
- B. Creates an array of zeros
- C. Creates an array of ones
- D. Creates a random array

7. **6. What will be the output of the following code?** * 1 point

```
import numpy as np
arr = np.array([[1, 2], [3, 4], [5, 6]])
print(arr[1, 1])
```

Mark only one oval.

- A. 1
- B. 2
- C. 3
- D. 4

8. **7. What is the output of the following code?** * 1 point

```
import numpy as np
arr = np.array([[1, 2, 3], [4, 5, 6], [7, 8, 9]])
print(arr[0:2, 1:3])
```

Mark only one oval.

- A. [[1, 2], [4, 5]]
- B. [[2, 3], [5, 6]]
- C. [[1, 2, 3], [4, 5, 6]]
- D. [[2, 3], [5, 6], [8, 9]]

9. **8. How do you read a CSV file into a Pandas DataFrame?** * 1 point

Mark only one oval.

- A. pd.read_csv('file.csv')
- B. pd.read_file('file.csv')
- C. pd.read_data('file.csv')
- D. pd.load_csv('file.csv')

10. **9. How do you add a new column to an existing DataFrame?** * 1 point

Mark only one oval.

- A. df['new_column'] = [values]
- B. df.add_column('new_column', [values])
- C. df.insert('new_column', [values])
- D. df.append('new_column', [values])

11. **10. What does the df.dropna() method do in Pandas?** * 1 point

Mark only one oval.

- A. Drops all rows with missing values
- B. Drops all columns with missing values
- C. Fills missing values with a specified value
- D. None of the above

12. **11. What is the output of the following code?** * 1 point

```
class A:
    def __init__(self, x):
        self.x = x

class B(A):
    def __init__(self, x, y):
        super().__init__(x)
        self.y = y

obj = B(1, 2)
print(obj.x, obj.y)
```

Mark only one oval.

- A. 1 1
- B. 2 2
- C. 1 2
- D. Error

13. **12. Which of the following methods can be used to install a Python module?** * 1 point

Mark only one oval.

- A. pip install module_name
- B. apt-get install module_name
- C. yum install module_name
- D. brew install module_name

14. **13. How do you select a single column from a DataFrame?** * 1 point

Mark only one oval.

- A. df.column_name
- B. df['column_name']
- C. df.loc[:, 'column_name']
- D. All of the above

15. **14. What does the df.describe() method do in Pandas?** * 1 point

Mark only one oval.

- A. Provides descriptive statistics of the DataFrame
- B. Displays the DataFrame
- C. Renames columns of the DataFrame
- D. Filters rows of the DataFrame

16. **15. What will be the output of the following code?** * 1 point

```
x = [1, 2, 3, 4, 5]
print(x[::-1])
```

Mark only one oval.

- A. [1, 2, 3, 4, 5]
- B. [5, 4, 3, 2, 1]
- C. [2, 3, 4, 5, 1]
- D. Error

17. **16. What is the output of the following code?** * 1 point

```
def func(a, b=[]):
    b.append(a)
    return b

print(func(1))
print(func(2))
```

Mark only one oval.

- A. [1] [2]
- B. [1] [1, 2]
- C. [1, 2] [1, 2]
- D. Error

18. **17. Which of the following statements is true about list comprehensions in Python?** * 1 point

Mark only one oval.

- A. They create a new list by applying an expression to each element in an existing list.
- B. They are generally slower than regular for-loops.
- C. They cannot include conditional statements.
- D. They are used to modify elements in-place.

19. **18. What will be the output of the following code?** * 1 point

```
names = ["Alice", "Bob", "Charlie"]
scores = [85, 90, 95]
result = list(zip(names, scores))
print(result)
```

Mark only one oval.

- A. [('Alice', 85), ('Bob', 90), ('Charlie', 95)]
- B. ['Alice', 'Bob', 'Charlie', 85, 90, 95]
- C. [['Alice', 85], ['Bob', 90], ['Charlie', 95]]
- D. ['Alice:85', 'Bob:90', 'Charlie:95']

20. **19. What will be the output of the following code?** * 1 point

```
nums = [1, 2, 3, 4, 5]
print(list(map(lambda x: x**2, nums)))
```

Mark only one oval.

- A. [1, 2, 3, 4, 5]
- B. [1, 4, 9, 16, 25]
- C. [2, 4, 6, 8, 10]
- D. Error

21. **20. What is the current version of Python ?** * 1 point

Mark only one oval.

- 3.6.10
- 3.12.2
- 3.12.4
- 3.6.5