Python Basics Quiz (1)

Created By @Mohamed Hamed

1st – year Artificial Intelligence student at KFS university, you can find me down:

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Instructions:

- ✔Choose the best answer for each question.
- ✔Each question has one correct answer.
- ✔Some questions include tricky elements to test your understanding.
- * **Click here to get answers**

1. What is the correct way to declare a variable in Python?

- A) var x = 10
- B) int x = 10
- C) 10 = x
- D) x = 10

2. What will be the output of the following code?

```python
x = [1, 2, 3]
y = x
y.append(4)
print(x)
```

- A) [1, 2, 3]
- B) [1, 2, 3, 4]
- C) None of these
- D) [1, 2, 3, [4]]

3. Which of the following is NOT a valid variable name in Python?

- A) _var
- B) 2var
- C) var_2
- D) __init__

4. What will be the output of the following code?

```python
x = {1, 2, 3, 3, 2}
print(len(x))
```

- A) 5
- B) 4
- C) 3
- D)None of these

5. What is the correct way to access the value associated with the key 'name' in the dictionary below?

```python
d = {'name': 'Alice', 'age': 25}
```

- A) d[name]
- B) d.get('name')
- C) d['Alice']
- D) d.name

6. Which of the following can be used as dictionary keys?

- A) Lists
- B) Tuples
- C) Dictionaries
- D) Sets

7. What will be the output of the following code?

```python
x = {'a': 1, 'b': 2}
x['c'] = 3
print(x)
```

A) {a: 1, b: 2}

B) {a: 1, b: 2, c: 3}

C) {'a': 1, 'b': 2, 'c': 3}

D) Error

8. What is the correct way to create a list with elements 1 to 10?

- A) list(range(1, 10))
- B) list(range(1, 11))
- C) [1, 10]
- D) range(1, 10)

9. What is the difference between a list and a tuple?

- A) Lists are immutable, tuples are mutable.
- B) Tuples are immutable, lists are mutable.
- C) Both are mutable.
- D) Both are immutable.

10. What will be the output of the following code?

```python
x = '5'
y = 5
print(x == y)
```

- A) True
- B) False
- C) Error
- D) None

11. What does the set data structure do?

- A) Maintains order and allows duplicates.
- B) Removes duplicates and maintains order.
- C) Removes duplicates and has no guaranteed order.
- D) Works the same as a list.

12. What is the correct way to iterate through a dictionary and access both keys and values?

- A) for key in dict:
- B) for key, value in dict.items():
- C) for value in dict.values():
- D) for key in dict.keys():

13. What type of error in the following code?

```
a, b, _ = 1, 3, 5, 7
```

A) TypeError B) ValueError

C) SyntaxError D) No Errors

14. What will be the output of the following code?

```
x = sum(range(1))
list1 = [x] + [1, 2, 3]
list1.extend([4, [-2]])
list1[0] = [10]
print(list1)
```

- A) [[10], 0, 1, 2, 3, [4], [-2]]
- B) [[10], 0, 1, 2, 3, 4, [-2]]
- C) [[10], 0, 1, 2, 3, 4, -2]
- D) [10, 0, 1, 2, 3, [4], [-2]]

15. What will be the output of the following code?

```python
x = 5.0
y = 5
print(x == y)
```

- A) True
- B) False
- C) Error
- D) None

17. Which of the following code will not show error ?

- A) print("Hallo World"); print("Hello World")
- B) print(x)
- C) 10 = x print(x)
- D) None of these

18. What will be the output of the following code?

```python
x = y = [1, 3, 5]
new_list = [11, 13, 15]
y[0] = new_list
print("new x: ", x)
print("new y: ", y)
```

?

- A) x = [[11, 13, 15], 3, 5], y same as x
- B) x = [[11, 13, 15], 3, 5], y = [[11, 13, 15], 3, 5]
- C) x = [11, 13, 15, 3, 5], y = [[11, 13, 15], 3, 5]
- D) None of these

19. What will be the output of the following code?

```python
x = y = [1, 3, 5]
newList = [11, 13, 15]
y = newList
print("new x: ", x)
print("new y: ", y)
```

- A) x = [1, 3, 5], y same as x
- B) x = [[11, 13, 15], 3, 5], y = [11, 13, 15]
- C) x = [1, 3, 5], y = [11, 13, 15]
- D) None of these

20. Which of the following code will not show error ?

- A) print("10" * "10")
- B) print(5 +"10")
- C) print('2'+'2')
- D) 10 = x; print(x)

21. What will be the output of the following code?

```
list_x = list_y = [1, "Mohamed", 2, 3, 9]
list_x[0:5] = []
print(list_y)
list_x[0:3] = [1]
print(list_y)
print(list_x[9])
```

- A) [], [1], 9
- B) [], [1], error
- C) [1, "Mohamed", 2, 3, 9], [1, 3, 9], 9
- D) [], [1, "Mohamed", 2, 3, 9], error

22. What gets printed?

```
X = sum(range(5))
print(x)
```

- A) 10
- B) Error
- C) 15
- D) 5

23. What will be the output of the following code?

```
x = [1, 10, 50, "Mohamed", 99]
x.reverse()
print(x)
```

- A) [99, 'Mohamed', 50, 10, 1]
- B) [99, 'Mohamed', 50, 10, 99]
- C) [1, 10, 50, "Mohamed", 99]
- D) [1, 'Mohamed', 50, 1099]

24. What will be the output of the following code?

```
x = [3, "A", "C", "D", 1]
x.sort(reverse=True)
print(x)
```

- A) [1, "A", "C", "D", 3]
- B) [1, "D", "C", "A", 3]
- C) [3, "D", "C", "A", 1]
- D) Error

25. What will be the output of the following code?

```
list1 = [[]] * 3
list1[0].append(5)
print(list1)
```

- A) [[], [], []]
- B) [[5], [], []]
- C) [[5], [5], [5]]
- D) Error

26. What will be the output of the following code?

```
list1 = [1, 2, 3]
list2 = list1
list1 += [4]
print(list2)
```

- A) [1, 2, 3, [4]]
- B) [1, 2, 3], [4]
- C) [1, 2, 3, 4]
- D) [1, 2, 34]

27. What will be the output of the following code?

```
x = [1, 2, [3, 4, 5], 6, 7]
x += [[9, 11, 13]]
print(x[2][1]); print(x[5][1]
```

A) 4, 11 B) [4], [11] C) 9, 3 D) [3], [9]

28. What will be the output of the following code?

```
x = [1, 3, "M"]
x.clear()
print(x)
print(x.clear()))
```

- A) [], None
- B) None, Error
- C) [], Error
- D) None, []

29. What will be the output of the following code?

```
x = [3, "A", "B", "C", 1]
y = [7, "D", "E", "F", 5]
x.insert(3, y)
print(x[3])
```

- A) [7, 'D', 'E', 'F', 5]
- B) 7, 'D', 'E', 'F', 5
- C) Error
- D) C

30. What does list.sort() return?

- A) A sorted list
- B) None
- C) Error
- D) A new list

31. How can you remove duplicates from a list while maintaining order?

- A) list(set(lst))
- B) list.remove_duplicates(lst)
- C) sorted(set(lst))
- D) list(dict.fromkeys(lst))

32. What will be the output of the following code?

```
List1 = [1, 2, 3, 4]
print(List1[-1:0:-1])
```

- A) [4, 3, 2]
- B) [2, 3, 4]
- C) [4, 3, 2, 1]
- D) [4, 2, 3, 1]

33. What happens if you use slicing (list[:] = new_list) instead of assignment (list = new_list)?

A) It results in an error.
B) It replaces the contents of the original list.
C) It works only for lists of equal length.
D) It creates a new list object.