Weekly Test - March 7, 2025

1. What is the data type of the following variable?

```python
In [7]:  x = 10
         type(x)
```

```
Out[7]:  int
```

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

```python
In [10]:  x = 5.5
          print(type(x))
```

```
<class 'float'>
```

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

```python
In [13]:  x = "Hello"
          y = 10
          print(type(x) == type(y))
```

```
False
```

4. What is the correct way to declare a string in Python?

- A) x = 'Hello'
- B) x = "Hello"
- C) x = '''Hello'''
- D) All of the above -> CORRECT ANSWER

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

```python
In [28]:  a = True  # true = 1
          b = False # false = 0
          print(a + b)
```

```
1
```

6. What is the default data type of a variable assigned with a numeric value containing a decimal point?

- A) int
- B) float # Correct answer
- C) double
- D) complex

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

- x = 3 + 4j
- print(type(x))

```
In [3]:  x = 3 + 4j
         print(type(x))
```

```
<class 'complex'>
```

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

- x = "10"
- y = 2
- print(x * y)

```
In [6]:  x = "10"
         y = 2
         print(x * y)
```

```
1010
```

9. Which of the following is a valid variable name in Python?

- A) 2var
- B) @var
- C) var_name
- D) _var #Correct

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

- x = None
- print(type(x))

```
In [10]:  x = None
          print(type(x))
```

```
<class 'NoneType'>
```

11. What is the output of bool("") in Python?

```
In [13]:  bool("") # An empty string is considered false in Python's boolean context
```

```
Out[13]:  False
```

```
In [1]: bool(" ") # This is a non-empty string, thus output is true
```

Out[1]: True

```
In [15]: bool("1")
```

Out[15]: True

```
In [17]: bool("0")
```

Out[17]: True

12. Which of the following is an immutable data type?

- A) list
- B) tuple # Correct answer
- C) dictionary
- D) set

13. Which of the following statements correctly defines a variable in Python?

- A) x : int = 10
- B) x = 10
- C) x, y = 5, "hello"
- D) All of the above #Correct answer

14. What is the correct syntax for defining a constant variable in Python?

- A) const PI = 3.14
- B) PI = 3.14
- C) PI = 3.14 # In uppercase to indicate a constant
- D) define PI 3.14

15. What will be the output of type([]) in Python?

```
In [25]: type([])
```

Out[25]: list

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

```
In [28]: x = 10
         y = 10.5
         print(type(x + y))
```

```
<class 'float'>
```

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

```
In [31]: x = "5"
         y = 2
         print(x + str(y))
```

52

18. What will be the output of type({}) in Python?

```
In [34]: type({})
```

Out[34]: dict

19. Which of the following is not a valid Python data type?

- A) list
- B) dictionary
- C) array
- D) char #Correct answer

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

- x = [1, 2, 3]
- print(type(x))

```
In [38]: x = [1, 2, 3]
         print(type(x))
```

<class 'list'>

21. Which of the following statements is correct about Python variables?

- A) Variables must be declared before use.
- B) Variables do not need explicit declaration. #Correct answer
- C) Variable type must be defined before assignment.
- D) Python does not support variables.

22. What will be the output of type(set())?

- A) set #Correct answer
- B) dict
- C) list
- D) tuple

```
In [42]: type(set())
```

Out[42]: set

23. What is the output of the following code?

- x = (1,)
- print(type(x))

```
In [45]: x = (1,)
         print(type(x))
```

```
<class 'tuple'>
```

24. What is the default data type of a variable assigned with a boolean value?

- A) int
- B) bool #Correct answer
- C) str
- D) float

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

- x = "Hello"
- y = 'Hello'
- print(x == y)

```
In [50]: x = "Hello"
         y = 'Hello'
         print(x == y)
```

```
True
```

26. What is the type of range(10) in Python?

- A) list
- B) tuple
- C) range #Correct answer
- D) generator

```
In [12]: range(10)
```

```
Out[12]: range(0, 10)
```

```
In [14]: type(range(10))
```

```
Out[14]: range
```

27. What will be the output of type({1, 2, 3})?

```
In [55]: type({1, 2, 3})
```

```
Out[55]: set
```

28. What will be the output of type(True + 5)?

```
In [58]: type(True + 5)
```

```
Out[58]: int
```

29. Which of the following is a mutable data type?

- A) tuple
- B) list #Correct answer
- C) string
- D) int

30. What is the correct way to delete a variable in Python?

- A) drop var_name
- B) del var_name #Correct answer
- C) delete var_name
- D) remove var_name

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

- x = "Python"
- print(len(x))

```
In [63]: x = "Python"
         print(len(x))
```

6

32. Which of the following is used to check the data type of a variable?

- A) checktype()
- B) typeof()
- C) type() #Correct answer
- D) datatype()

33. What will be the output of type(10/2) in Python?

```
In [68]: type(10/2)   # output is 5.0
```

```
Out[68]: float
```

```
In [70]: type(10//2)   # output is 5
```

```
Out[70]: int
```

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

- x = {1, 2, 3, 3, 2}

- print(len(x))

```
In [73]:  x = {1, 2, 3, 3, 2}
          print(len(x))
```

3

35. Which of the following is true for Python lists?

- A) Lists are immutable
- B) Lists are mutable #Correct answer
- C) Lists store only numeric values
- D) Lists store only string values

36. What is the data type of the variable x in the following code?

- x = (1, 2, "hello", 4.5)

```
In [77]:  x = (1, 2, "hello", 4.5)
          type(x)
```

Out[77]: tuple

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

- x = 5
- y = "Hello"
- print(str(x) + y)

```
In [80]:  x = 5
          y = "Hello"
          print(str(x) + y)
```

5Hello

38. What is the result of the following code?

- x = 3.0
- y = int(x)
- print(y)

```
In [86]:  x = 3.0
          y = int(x)
          print(y)
```

3

39. Which of the following statements is true?

- A) Tuple is mutable
- B) Dictionary keys must be unique #Correct answer

- C) List keys must be unique
- D) Set allows duplicate values

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

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

```
In [90]: x = [1, 2, 3]
         y = x
         y.append(4)
         print(x)
```

[1, 2, 3, 4]

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

- x = (1, 2, 3)
- x[0] = 4

```
In [21]: x = (1, 2, 3)
         x[0] = 4  # we will get error
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[21], line 2
      1 x = (1, 2, 3)
----> 2 x[0] = 4

TypeError: 'tuple' object does not support item assignment
```

42. What will be the output of type({}) in Python?

```
In [96]: type({})
```

Out[96]: dict

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

- x = 10
- print(isinstance(x, int))

```
In [99]: x = 10
         print(isinstance(x, int))
```

True

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

- x = "Python"

- print(x[0])

In [102…]
```python
x = "Python"
print(x[0])
```

P

45. Which of the following is a valid dictionary declaration?

- A) x = ["name": "Alice", "age": 25]
- B) x = [1, 2, 3]
- C) x = {"name": "Alice", "age": 25} #Correct answer
- D) x = (1, 2, 3)

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

- x = "Python"
- print(x[-1])

In [107…]
```python
x = "Python"
print(x[-1])
```

n

47. What will be the output of the following code

- x = [1, 2, 3]
- print(x * 2)

In [110…]
```python
x = [1, 2, 3]
print(x * 2)
```

[1, 2, 3, 1, 2, 3]

48. What will be the output of bool("False") in Python?

In [113…]
```python
bool("False")
```

Out[113…]   True

49. What will be the output of type([]) == type({})?

In [116…]
```python
type([]) == type({})
```

Out[116…]   False

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

- x = [1, 2, 3]
- y = x.copy()
- y.append(4)

- print(x)

In [119…
```python
x = [1, 2, 3]
y = x.copy()
y.append(4)
print(x)
```

[1, 2, 3]

In [26]:
```python
x = [1, 2, 3]
y = x.copy()
y.append(4)
print(y)
```

[1, 2, 3, 4]

In [24]:
```python
x = [1, 2, 3]
y = x
y.append(4)
print(x)
```

[1, 2, 3, 4]

In [ ]: