Python Pre Assessment Questions

Multiple Choice and Multi Select Type of Questions.

1. **What is the output of the following code snippet?**

```
1  print(8 // 3)
```

A) 2.66
B) 2
C) 3
D) 2.67
Answer: B) 2

2. **Which of the following are immutable types in Python?**

A) Lists
B) Tuples
C) Dictionaries
D) Sets
Answer: B) Tuples

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

```
1  x = "abcdef"
2  i = "i"
3  while i in x:
4      print(i, end = " ")
```

A) i i i i i i …
B) No output
C) abcdef
D) Error
Answer: D) Error

4. **Which of the following is not a valid Python variable name?**

A) _myvar
B) my_var
C) 1myvar
D) myVar
Answer: C) 1myvar

5. **Select the correct way to create a function in Python.**

A) function myFunc():
B) def myFunc():
C) create myFunc():
D) function: myFunc()
Answer: B) def myFunc():

6. **What does the `len()` function do in Python?**

   A) Returns the length of an object
   B) Converts an object to a list
   C) Counts the number of elements in a list
   D) Checks if the object is iterable
   Answer: A) Returns the length of an object

7. **Which of the following statements about Python dictionaries is correct?**

   A) Dictionaries can have duplicate keys.
   B) Dictionaries are ordered collections.
   C) Dictionary values must be of the same data type.
   D) Dictionaries are accessed by key.
   Answer: D) Dictionaries are accessed by key.

8. **What is the output of the following code?**

```python
def fun(x):
    x += 1
    return x

x = 2
x = fun(x+1)
print(x)
```

   A) 2
   B) 3
   C) 4
   D) 5
   Answer: C) 4

9. **Select all that apply: Which of these are valid ways to create a list in Python?**

   A) `list1 = list()`
   B) `list2 = []`
   C) `list3 = list[1, 2, 3]`
   D) `list4 = [1, 2, 3]`
   Answer: A) `list1 = list()`, B) `list2 = []`, D) `list4 = [1, 2, 3]`

10. **What is a correct syntax to return the first character in a string?**

    A) `str[0]`
    B) `str.first()`
    C) `str.charAt(0)`
    D) `str[1]`
    Answer: A) `str[0]`

11. **How is memory managed in Python?**

    A) Memory management is done manually by the programmer.
    B) Python uses an automatic garbage collector.
    C) Python's memory management is handled through Windows Memory Management.
    D) Python programs run inside a virtual machine which manages memory automatically.

Answer: B) Python uses an automatic garbage collector.

12. **What is the result of the following code snippet?**

```
1   list = [x*x for x in range(5)]
2   def fun(lst):
3       del lst[lst[2]]
4       return lst
5
6   print(fun(list))
```

A) `[0, 1, 4, 9, 16]`
B) `[1, 4, 9, 16]`
C) `[0, 1, 9, 16]`
D) `[0, 1, 4, 16]`
Answer: C) `[0, 1, 9, 16]`

13. **What does the `\*args` argument in Python functions signify?**

A) It signifies a syntax error.
B) It stands for a single required argument.
C) It represents an arbitrary number of positional arguments.
D) It is used to pass a keyworded, variable-length argument dictionary.
Answer: C) It represents an arbitrary number of positional arguments.

14. **In Python, what is the difference between `==` and `is`?**

A) No difference, both are used for equality checking.
B) `==` checks for equality of value, whereas `is` checks for equality of identity (same object in memory).
C) `==` is used for numerical comparisons, while `is` is used for string comparisons.
D) `is` is an older version of `==` and is now deprecated.
Answer: B) `==` checks for equality of value, whereas `is` checks for equality of identity (same object in memory).

15. **What will the following code print?**

```
1   a = [1, 2, 3]
2   b = a
3   b.append(4)
4   print(a)
```

A) `[1, 2, 3]`
B) `[1, 2, 3, 4]`
C) `[4, 1, 2, 3]`
D) Error
Answer: B) `[1, 2, 3, 4]`