1. What is Python?

* a) A snake species
* b) A high-level programming language
* c) A data structure
* d) A mathematical equation

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

* a) Integer
* b) Float
* c) String
* d) Array

3. What is the output of the following code snippet?

python

print(5 == 5)

* a) True
* b) False
* c) 5
* d) Error

4. What does the following code print?

```python

x = 5

y = 2

print(x \*\* y)

```

* a) 7
* b) 10
* c) 25
* d) 32

5. Which of the following is used for comments in Python?

* a) //
* b) #
* c) <!-- -->
* d) //

\*\*Intermediate Level:\*\*

6. What does the `range()` function return?

* a) A list of numbers
* b) A sequence of numbers
* c) A random number
* d) None of the above

7. What is the output of the following code snippet?

```python

my\_list = [1, 2, 3, 4, 5]

print(my\_list[2:4])

```

* a) [3, 4]
* b) [2, 3, 4]
* c) [1, 2, 3]
* d) [4, 5]

8. Which of the following statements about Python's `elif` keyword is true?

* a) It is short for "else if"
* b) It is used for exception handling
* c) It is used for defining functions
* d) It is an alternative to the `else` keyword

9. What does the `zip()` function do?

* a) Combines two lists into a dictionary
* b) Returns a list of tuples, where the i-th tuple contains the i-th element from each of the argument sequences or iterables
* c) Returns the union of two sets
* d) Zips files together into a single archive

10. What is the output of the following code snippet?

```python

def my\_function(x, y=3):

return x \* y

print(my\_function(4))

```

* a) 7
* b) 12
* c) 3
* d) 4

11. What does the 'print' function do in Python?

* a) Takes input from the user
* b) Displays output on the screen
* c) Performs mathematical calculations
* d) None of the above

12. Which of the following statements correctly uses the 'print' function to display text?

* a) print("Hello, World!")
* b) input("Hello, World!")
* c) input("Hello, World!")
* d) print(input("Hello, World!"))

13. How do you print multiple variables separated by spaces using the 'print' function?

* a) print(var1, var2)
* b) print(var1 + " " + var2)
* c) print("var1 var2")
* d) All of the above

14. Which function is used to take user input in Python?

* a) print()
* b) read()
* c) input()
* d) scan()

15. What does the 'input' function return in Python?

* a) Integer
* b) String
* c) List
* d) None

17. How do you prompt the user to enter their name using the 'input' function?

* a) input("Enter your name: ")
* b) input("Name: )
* c) print("Enter your name: ")
* d) print("Name: ")

18. Which of the following is true about the 'sep' parameter in the 'print' function?

* a) It separates the printed items with the specified character
* b) It appends the specified character at the end of the output
* c) It specifies the starting point of the output
* d) None of the above

19. How do you convert the user input obtained from the 'input' function into an integer?

* a) int(input())
* b) input(int)
* c) int(input(""))
* d) All of the above

20. What is the output of the following Python code snippet?

```python

text = "Hello, World!"

print(text[2:6])

```

* a) "lo, "
* b) "ello"
* c) "llo,"
* d) "llo "

21. Which of the following methods can be used to convert a string to uppercase in Python?

a) toUpper()

b) upper()

c) capitalize()

d) casefold()

22. What does the `strip()` method do in Python?

* a) Removes all occurrences of a specified character from the beginning and end of a string.
* b) Removes all leading and trailing whitespace from a string.
* c) Splits a string into a list based on a specified separator.
* d) Returns the index of the first occurrence of a specified substring in a string.

23. Which of the following Python code snippets checks if a string contains another substring?

* a) `substring in string`
* b) `string.contains(substring)`
* c) `string.find(substring)`
* d) `string.include(substring)`

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

```python

text = "Hello,World,Python"

print(text.split(","))

```

* a) ['Hello', 'World', 'Python']
* b) ['Hello,World,Python']
* c) ['Hello', ',', 'World', ',', 'Python']
* d) ['Hello', 'World', 'Python']

25. What does the `join()` method do in Python?

* a) Concatenates elements of a list into a single string.
* b) Splits a string into a list based on a specified separator.
* c) Replaces occurrences of a specified substring with another substring.
* d) Returns a string with leading whitespace removed.

26. Which method can be used to replace only a specified number of occurrences of a substring within a string?

* a) `replace()`
* b) `sub()`
* c) `replacenum()`
* d) `replaceall()`

27. What does the `startswith()` method do in Python?

* a) Checks whether a string ends with a specified suffix.
* b) Checks whether a string starts with a specified prefix.
* c) Returns the index of the first occurrence of a specified substring.
* d) Reverses the characters of a string.

28. Which of the following is the correct way to format a string using placeholders in Python?

* a) `print("Hello, {}!".format(name))`
* b) `print("Hello, %s!" % name)`
* c) `print(f"Hello, {name}!")`
* d) All of the above.

29. What is a variable in Python?

* a) A reserved word that cannot be changed
* b) A container for storing data values
* c) A built-in function for mathematical calculations
* d) A data structure for organizing code blocks

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

* a) 1st\_variable
* b) my\_variable
* c) global
* d) import

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

```python

x = 5

y = "Hello"

print(x + y)

```

* a) 5Hello
* b) Hello5
* c) TypeError
* d) 10

32. How do you declare multiple variables in one line in Python?

* a) var1, var2 = value1, value2
* b) var1 = value1, var2 = value2
* c) var1, var2 == value1, value2
* d) var1 == value1; var2 == value2

33. What data type is a variable `x` if `x = 3.14`?

* a) Integer
* b) Float
* c) String
* d) Boolean

34. What is the scope of a variable in Python?

* a) The range of values a variable can hold
* b) The location in memory where a variable is stored
* c) The portion of code where a variable is accessible
* d) The lifetime of a variable within a program

35. Which of the following is true about global variables in Python?

* a) They can be accessed only within the function where they are defined
* b) They can be accessed from any function within the same module
* c) They have limited visibility and can only be accessed from the main function
* d) They are constants that cannot be modified once defined

36. What will be the output of the following code snippet?

```python

x = 10

def func():

global x

x = 20

func()

print(x)

```

* a) 10
* b) 20
* c) 30
* d) NameError

37. What does the `del` statement do in Python?

* a) Deletes the value stored in a variable
* b) Deletes a variable from memory
* c) Deletes the reference to a variable
* d) Deletes the variable's datatype

38. What is the difference between local and global variables in Python?

* a) Local variables are declared outside of any function, while global variables are declared within functions.
* b) Local variables are accessible from any part of the program, while global variables are only accessible within the function where they are defined.
* c) Local variables have a shorter lifespan than global variables.
* d) Local variables are declared within functions and can only be accessed within those functions, while global variables can be accessed from anywhere in the program.

39. What is the correct data type for representing whole numbers in Python?

* a) int
* b) float
* c) str
* d) bool

40. Which of the following data types is mutable in Python?

* a) int
* b) float
* c) tuple
* d) list

41. Which data type in Python is used to store a sequence of characters?

* a) int
* b) float
* c) str
* d) list

42. Which of the following data types is used to represent a collection of elements with no duplicates and unordered elements?

* a) list
* b) set
* c) tuple
* d) dictionary

43. What is the output of the following code?

```python

x = 5

print(type(x))

```

* a) int
* b) float
* c) str
* d) None of the above

44. What is the output of the following code?

python

x = 10 / 3

print(x)

* a) 3.3333333333333335
* b) 3.33
* c) 3.0
* d) 3

45. Which of the following data types in Python is used to represent a collection of key-value pairs?

* a) list
* b) set
* c) tuple
* d) dictionary

46. Which method is used to add an element to the end of a list in Python?

* a) append()
* b) extend()
* c) insert()
* d) add()

47. What is the correct way to create an empty set in Python?

* a) set()
* b) {}
* c) ()
* d) []

48. Which of the following is NOT a valid data type conversion in Python?

* a) int to float
* b) float to str
* c) str to int
* d) list to dictionary

49. Which of the following is a valid integer in Python?

* a) 3.14
* b) 42
* c) "hello"
* d) [1, 2, 3]

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

```python

x = 5

y = 2

print(x / y)

```

* a) 2.5
* b) 2
* c) 2.0
* d) Error

51. Which operator is used for floor division in Python?

* a) /
* b) //
* c) %
* d) \*

52. What data type does the result of a division operation involving only integers produce?

* a) float
* b) int
* c) str
* d) bool

53. What function can you use to convert a string to an integer in Python?

* a) str()
* b) int()
* c) float()
* d) bool()

Intermediate Level:

54. What will be the result of the following expression?

```python

x = 7.0 / 2

```

* a) 3.5
* b) 3
* c) 4.0
* d) 4

56. Which of the following is not a valid way to represent a floating-point number in Python?

* a) 3.14
* b) 3.
* c) .14
* d) 3,14

57. What will be the result of the following code?

```python

x = 5

y = 2

print(x \*\* y)

```

* a) 25
* b) 10
* c) 8
* d) Error

58. What is the output of the following code?

```python

x = 5

y = 2

print(x / float(y))

```

* a) 2.5
* b) 2
* c) 2.0
* d) Error

59. Which of the following methods can be used to check if a variable is of type float?

* a) is\_float()
* b) isinstance(var, float)
* c) var.type() == float
* d) type(var) == float

60. What is a set in Python?

* a) A data structure that stores elements in a sequential order
* b) A data structure that stores unique elements in an unordered collection
* c) A data structure that stores elements in a sorted manner
* d) A data structure that stores elements in key-value pairs

61. Which of the following symbols is used to create an empty set in Python?

* a) {}
* b) []
* c) ()
* d) //

62. What happens if you try to add a duplicate element to a set in Python?

* a) It raises an error
* b) It silently ignores the duplicate element and continues execution
* c) It removes the duplicate element automatically
* d) It modifies the original element with the new value

63. Which method is used to remove an element from a set in Python?

* a) remove()
* b) delete()
* c) discard()
* d) pop()

64. What is the output of the following code?

```python

set1 = {1, 2, 3}

set2 = {3, 4, 5}

print(set1.intersection(set2))

```

* a) {1, 2, 3}
* b) {3}
* c) {4, 5}
* d) {}

65. What is the difference between a set and a frozenset in Python?

* a) Sets are mutable while frozensets are immutable
* b) Frozensets are mutable while sets are immutable
* c) Both sets and frozensets are immutable
* d) Both sets and frozensets are mutable

66. Which method is used to combine two sets in Python?

* a) merge()
* b) union()
* c) combine()
* d) join()

67. What is the purpose of the `clear()` method in Python sets?

* a) It removes all elements from the set
* b) It sorts the elements of the set
* c) It reverses the order of elements in the set
* d) It returns a copy of the set with all elements removed

68. How can you check if a set is a subset of another set in Python?

* a) Using the `issubset()` method
* b) Using the `issuperset()` method
* c) Using the `subset()` function
* d) Using the `superset()` function

69. Which of the following statements about set comprehension in Python is true?

* a) Set comprehension is not supported in Python
* b) Set comprehension creates a set by iterating over elements of another iterable
* c) Set comprehension only works for numerical data
* d) Set comprehension allows defining complex conditions for element inclusion in the set

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

python

a = (1, 2, 3)

b = (4, 5, 6)

c = a + b

print(c)

* a)[1,2,3,4,5,6]
* b)(1,2,3,4,5,6)
* c)(1,2,3) (4,5,6)
* d)[(1,2,3), (4,5,6)]