Computational Thinking and Programming - I
Mock Test - I

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Instructions for the Examinee

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1. **Total Questions:** The paper consists of 150 multiple-choice questions (MCQs).
2. **Total Time:** You have a total of 120 minutes (2 hours) to complete the examination. This means you have approximately 48 seconds per question. Time management is key!
3. **Marking Scheme:**
   - For each correct answer, you will be awarded **+4 marks**.
   - For each incorrect answer, **1 mark will be deducted** from your total score.
   - No marks will be awarded or deducted for unattempted questions.
   - Maximum marks: 600
   - Minimum marks: -150
4. **Question Format:** Each question has four options (A, B, C, D). Only **one** of these options is correct.
5. **Syllabus Coverage:** The questions are based on the ”Computational Thinking and Programming - I” syllabus, testing your theoretical knowledge, logical reasoning, and coding skills in Python.
6. **Difficulty Level:** The questions are designed to be of intermediate difficulty, with some tricky ones to challenge you. Read each question and its options carefully before answering.
7. **A Touch of Humor:** Don’t be surprised if you find a few questions that are a bit funny. They are designed to be a small break from the intensity. However, they still require a correct answer!
8. **Rough Work:** You can use the blank pages provided for rough work.
9. **Answer Sheet:** It is requested to provide the Answer script in a LaTeXScript or PDF made using LaTeX

Questions

1. A programmer is creating a flowchart for a program that checks if a number is even or odd. Which of the following symbols would be most appropriate to represent the decision "is the number divisible by 2"?

   A) Rectangle (Process)

   B) Parallelogram (Input/Output)

   C) Diamond (Decision)

   D) Oval (Start/End)

2. Consider the following pseudocode to find the largest of three numbers (A, B, C):

```
1. START
2. READ A, B, C
3. IF A > B THEN
4.   IF A > C THEN
5.     PRINT A
6.   ELSE
7.     PRINT C
8.   ENDIF
9. ELSE
10.  IF B > C THEN
11.    PRINT B
12.  ENDIF
13. ENDIF
14. STOP
```

   For which set of inputs will this pseudocode fail to produce the correct output?

   A) A=10, B=20, C=30

   B) A=30, B=20, C=10

   C) A=10, B=30, C=20

   D) A=20, B=10, C=30

3. Breaking down a complex problem into smaller, more manageable sub-problems is a key step in problem-solving. This process is known as:

   A) Decomposition

   B) Abstraction

   C) Debugging

   D) Compilation

4. Why was the Python programming language named "Python"?

   A) After the snake, because it's a powerful and flexible language.

   B) It's an acronym for "Programming Your Thoroughly Helpful Online Notes".

   C) After the British comedy troupe "Monty Python's Flying Circus".

   D) It was randomly generated by a computer program.

5. Which of the following is an invalid identifier in Python?

   A) `_my_variable`

   B) `myVariable`

   C) `2nd_variable`

   D) `my_variable_2`

6. What is the difference between interactive mode and script mode in Python?

   A) Interactive mode is for writing long programs, while script mode is for single commands.

   B) Interactive mode executes commands immediately, while script mode saves commands in a file for later execution.

   C) Interactive mode does not show errors, while script mode does.

   D) There is no difference; the terms are used interchangeably.

7. In Python, a variable `x = 10` is defined. The `10` in this context is referred to as:

   A) An l-value

   B) An r-value

   C) A functor

   D) A keyword

8. Which of the following data types in Python is immutable?

   A) List

   B) Dictionary

   C) Set

   D) Tuple

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

```python
x = [1, 2, [3, 4]]
y = x.copy()
y[2][0] = 5
print(x)
```

   A) [1, 2, [3, 4]]

   B) [1, 2, [5, 4]]

   C) [1, 2, 5]

   D) A TypeError will be raised.

10. The data type that can store a value of either `True` or `False` is:

    A) `integer`

    B) `float`

    C) `complex`

    D) `boolean`

11. Consider `a = 10` and `b = 10.0`. What will be the output of `a == b` and `a is b` respectively?

    A) `True`, `True`

    B) `True`, `False`

C) `False, True`

D) `False, False`

12. What is the value of the expression `10 // 3 ** 2 * 2`?

A) `2`

B) `1`

C) `2.22`

D) `0`

13. What will be the output of the following Python code?

```
x = 5
x += 3 * 2
print(x)
```

A) 16

B) 11

C) 13

D) 30

14. Which of the following expressions evaluates to `True`?

A) `not (5 > 3 and 2 3) and (2 3 or 2 1)`

15. What is the output of `'p' in 'python'` and `'P' in 'python'`?

A) `True, True`

B) `True, False`

C) `False, True`

D) `False, False`

16. Which of the following is an example of explicit type conversion?

A) `5 + 2.5`

B) `int('10')`

C) `'Hello ' + 'World'`

D) `x = 10`

17. What will be the output of `print(int(10.7) + float(10))`?

A) `20.7`

B) `20.0`

C) `21`

D) A `ValueError`

18. A user enters `42` when the following code is run. What will be the output?

```
age = input("Enter your age: ")
print(age * 2)
```

A) 84

B) 4242

C) 42 42

D) A TypeError

19. An error that occurs when the program is syntactically correct but does something other than what the programmer intended is called a:

A) Syntax Error

B) Runtime Error

C) Logical Error

D) Compilation Error

20. What type of error will be raised by the following code?

```
x = 10 / 0
```

A) SyntaxError

B) ZeroDivisionError

C) TypeError

D) NameError

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

```
x = 0
if x > 0:
    print("Positive")
elif x == 0:
    print("Zero")
else:
    print("Negative")
```

A) Positive

B) Zero

C) Negative

D) No output

22. To sort three numbers `a, b, c` in ascending order, which of the following conditional structures would be the most straightforward to implement?

A) A single `if` statement

B) An `if-else` statement

C) A series of `if` statements

D) A nested `if-elif-else` structure

23. What is the output of the following code?

```
for i in range(1, 6, 2):
    print(i, end=' ')
```

A) 1 2 3 4 5

B) 1 3 5

C) 1 2 3 4 5 6

D) 2 4 6

24. How many times will the "inner loop" be executed in the following code?

```
for i in range(3):
    for j in range(2):
        # inner loop
        print(i, j)
```

A) 5

B) 6

C) 3

D) 2

25. What will the following `while` loop print?

```
i = 5
while i > 0:
    i -= 1
    if i == 2:
        continue
    print(i, end=' ')
```

A) 4 3 1 0

B) 4 3 2 1 0

C) 4 3 1

D) 5 4 3 1 0

26. If a programmer wants to write a loop that executes forever (until the program is interrupted), which of the following is the most common way to do it?

A) `for i in range(infinity):`

B) `while True:`

C) `while 1 pi`

D) `Pi()`

27. If you use the statement `from math import sqrt`, how would you calculate the square root of 16?

A) `math.sqrt(16)`

B) `sqrt(16)`

C) `math->sqrt(16)`

D) `sqrt.math(16)`

28. What is the primary advantage of using `import random as rd`?

A) It makes the program run faster.

B) It imports all functions from the `random` module.

C) It provides a shorter alias, which is useful for long module names.

D) It is the only way to import a module.

29. A potential issue with using `from module import *` is that:

A) It is much slower than a standard import.

B) It can lead to name clashes if functions from the module have the same name as variables in your code.

C) It does not import variables from the module, only functions.

D) It is deprecated and will be removed in future Python versions.

30. The trigonometric functions in the `math` module, such as `math.sin()` and `math.cos()`, expect their input to be in which unit?

A) Degrees

B) Radians

C) Gradians

D) Steradians

31. What is the output of `print(math.ceil(5.2), math.floor(5.8))` after importing the `math` module?

A) `5 6`

B) `6 5`

C) `5.0 5.0`

D) `6.0 5.0`

32. What are the return types of `3 ** 2` and `math.pow(3, 2)` respectively?

A) `int`, `int`

B) `float`, `int`

C) `float`, `float`

D) `int`, `float`

33. What will be the result of `math.sqrt(-9)`?

A) `-3.0`

B) `3.0`

C) A `ValueError`

D) A `TypeError`

34. A programmer is feeling lazy and wants to calculate the absolute value of `-20`. Which of these functions will give the result `20.0`?

A) `abs(-20)`

B) `math.abs(-20)`

C) `math.fabs(-20)`

D) `fabs(-20)`

35. A student's code has a logical error. They decide to fix it by putting `import random` at the top and running the code again, hoping for a different outcome. This debugging technique is fondly known as:

A) Stochastic Programming

B) Hope-Driven Development

C) Nondeterministic Analysis

D) A terrible idea that almost never works

36. Which function from the `random` module would you use to get a random integer between 1 and 10, inclusive?

A) `random.random(1, 10)`

B) `random.randrange(1, 10)`

C) `random.randint(1, 10)`

D) `random.choice(1, 10)`

37. Which of the following code snippets can produce the integer `5` as output?

    A) `random.randrange(5)`
    B) `random.randint(1, 4)`
    C) `random.randrange(1, 5)`
    D) `random.randint(5, 10)`

38. What is the key difference between `random.randrange(a, b)` and `random.randint(a, b)`?

    A) `randrange` includes `b` in the range, while `randint` does not.
    B) `randint` includes `b` in the range, while `randrange` does not.
    C) `randrange` can only be used with a step value.
    D) `randint` returns a float, while `randrange` returns an integer.

39. To simulate a fair coin flip that results in either "Heads" or "Tails", which is the most suitable approach?

    A) `random.randint(0, 1)`
    B) `random.choice(["Heads", "Tails"])`
    C) `random.random()`
    D) `random.randrange(2)`

40. What does `random.random()` return?

    A) A random integer.
    B) A random floating point number in the range [0.0, 1.0).
    C) A random floating point number in the range [0.0, 1.0].
    D) A random byte.

41. Given the list `data = [10, 20, 30, 40]`, what is the result of `statistics.mean(data)`?

    A) `25.0`
    B) `25`
    C) `30`
    D) `100`

42. What is the median of the list `nums = [5, 2, 8, 1, 9]`?

    A) `8`
    B) `5`
    C) `2`
    D) `5.2`

43. What will `statistics.mode([1, 2, 2, 3, 3, 4])` return?

    A) `2`
    B) `3`
    C) `[2, 3]`
    D) A `StatisticsError`

44. For the dataset `[1, 1, 2, 5, 6]`, which of the following is true?

    A) mean ¿ median ¿ mode
    B) median ¿ mean ¿ mode
    C) mode ¿ mean ¿ median
    D) mean ¿ median = mode

45. What is the output of the following code?

```
import math
data = [1, 4, 9, 16]
result = [int(math.sqrt(x)) for x in data if
     x > 5]
print(sum(result))
```

    A) 7
    B) 7.0
    C) 9
    D) 10

46. What is a possible output of this code snippet?

```
import random
chars = 'xyz'
print(random.choice(chars) + str(random.
    randint(1,1)))
```

    A) y2
    B) z1
    C) x2
    D) z

47. What is the result of the following expression?

```
int(math.log10(100)) + math.floor(3.14)
```

    A) 5
    B) 5.0
    C) 5.14
    D) 6

48. You have a list of numbers `L`. Which of the following is guaranteed to raise an error if `L` is empty?

    A) `len(L)`
    B) `sum(L)`
    C) `sorted(L)`
    D) `statistics.mean(L)`

49. A programmer wants to get a random even number between 2 and 10 (inclusive). Which of the following is the best way to do this?

    A) `random.randint(2, 10)`
    B) `random.randrange(2, 10, 2)`
    C) `random.randrange(2, 11, 2)`
    D) `random.choice([2, 4, 6, 8, 10])`

50. What is the output of the code below?

```
import math
print(math.factorial(4) / math.pow(2, 3))
```

A) 3
B) 3.0
C) 4
D) 4.0

51. What is the final value of x?

```
x = 100
for i in range(x):
    if i % 10 == 0:
        continue
    if i == 50:
        break
    x -= 1
```

A) 50
B) 55
C) 45
D) 60

52. A programmer explains their code to a rubber duck sitting on their desk until they spot the error in their logic. This sacred and time-honored tradition is called:

A) Quack-Oriented Programming
B) Rubber Duck Debugging
C) Fowl Play Analysis
D) The Duck-typing Method

53. Predict the output of the following code snippet.

```
data = {(1, 2): 'a', 'key': 'b'}
data[1, 2] = 'c'
data['key'] = (3, 4)
print(data[1, 2], data['key'][0])
```

A) a 3
B) c 3
C) c 4
D) A TypeError is raised.

54. What is the output of this code?

```
s = "  pytHon_is_fun  "
result = s.strip().capitalize().replace('_',
    ' ')
print(result)
```

A) Python is fun
B) PytHon is fun
C) Python Is Fun
D) Python is fun

55. Which of the following expressions will evaluate to `False`?

```
a = 257
b = 257
x = 5
y = 5
```

A) x is y
B) a is not b
C) a == b
D) a is b

56. What is the final value of the list `L`?

```
L = [1, 2, 3, 4, 5]
for x in L:
    if x % 2 == 0:
        L.remove(x)
```

A) [1, 3, 5]
B) [1, 3, 4, 5]
C) [1, 2, 3, 5]
D) [1, 3, 4]

57. Predict the output:

```
d = {'b': 1, 'a': 2, 'c': 0}
s_items = sorted(d.items())
print(s_items[1][0])
```

A) a
B) b
C) 1
D) 2

58. If a programmer accidentally tries to calculate `math.factorial(-1)`, their computer will most likely:

A) Return `0`.
B) Enter a state of existential crisis.
C) Return `-1`.
D) Raise a `ValueError`.

59. What is the value of `result`?

```
result = 0
i = 1
while i <= 10:
    result += i
    i += 2
print(result)
```

A) 55
B) 30
C) 25
D) 36

60. Consider the flowchart symbol for a process (a rectangle). In the context of writing a Python program, this symbol most closely corresponds to:

A) An `if` statement
B) An `input()` function call
C) A comment
D) An assignment statement like `x = y + 1`

61. What will the following code print?

```
my_tuple = (10, 20, [30, 40])
my_tuple[2][0] = 35
print(my_tuple)
```

A) (10, 20, [35, 40])
B) (10, 20, [30, 40])
C) It will raise a TypeError because tuples are immutable.
D) It will raise an IndexError.

62. In the expression `x = y`, `x` is the l-value and `y` is the r-value. Which of the following is true?

A) The l-value must be a memory location, while the r-value must be a value.
B) The r-value must be a memory location, while the l-value must be a value.
C) Both l-value and r-value must be memory locations.
D) The terms are interchangeable and have no real meaning.

63. What is the output of the code?

```
print(bool(None), bool([]), bool('False'))
```

A) False False False
B) False True True
C) False False True
D) True True True

64. The code `val = 1_000_000` is executed. What is the type and value of `val`?

A) `str`, `'1_000_000'`
B) `int`, `1000000`
C) It's a `SyntaxError`.
D) `tuple`, `(1, 0, 0, 0, 0, 0, 0)`

65. What will be printed on the screen?

```
for i in range(2):
    print(i, end=' ')
else:
    print("Loop finished!")
```

A) 0 1
B) 0 1 Loop finished!
C) 0 1 2 Loop finished!
D) Loop finished!

66. Now, what will this code print?

```
for i in range(5):
    print(i, end=' ')
    if i == 2:
        break
else:
    print("Loop finished!")
```

A) 0 1 2 Loop finished!
B) 0 1 2 3 4 Loop finished!
C) 0 1 2
D) 0 1

67. What is the result of `type('abc'.partition('d'))`?

A) `str`
B) `list`
C) `tuple`
D) `dict`

68. Which method call on a string `s` is guaranteed to return a list?

A) `s.find('a')`
B) `s.strip()`
C) `s.join(['a','b'])`
D) `s.split()`

69. What is the value of `z`?

```
x = [1, 2]
y = [3, 4]
z = [x, y]
x[0] = 5
```

A) [[1, 2], [3, 4]]
B) [[5, 2], [3, 4]]
C) [5, 2, 3, 4]
D) [1, 2, 3, 4]

70. You are given a list of employees: `employees = ['Alice', 'Bob', 'Charlie']`. Which of the following will add 'David' to the list so that the list becomes `['Alice', 'Bob', 'David', 'Charlie']`?

A) `employees.insert(2, 'David')`
B) `employees.insert(3, 'David')`
C) `employees.append('David')`
D) `employees[2] = 'David'`

71. What is the output of the following code?

```
d = {}
d[1] = 1
d['1'] = 2
d[1.0] = 3
print(d['1'], d[1])
```

A) 2 1
B) 2 3
C) 1 2
D) A KeyError is raised.

72. Which of the following methods removes a key from a dictionary and returns its value, but raises an error if the key is not found?

A) `get()`
B) `popitem()`
C) `pop()`

D) `clear()`

73. What will `statistics.mode(['cat', 'dog', 'dog', 'cat', 'tiger'])` return?

A) `'cat'`
B) `'dog'`
C) `['cat', 'dog']`
D) A `StatisticsError` is raised.

74. What is the value of `result`?

```
import random
random.seed(42) # Guarantees the same
    sequence of "random" numbers
L = [10, 20, 30, 40, 50]
result = random.choice(L[1:4])
```

A) 10
B) 40
C) 30
D) 20

75. The expression `True or False and not True` evaluates to:

A) `True`
B) `False`
C) `None`
D) A `SyntaxError`

76. What is the most likely reason a programmer would use the `pass` keyword?

A) To stop the execution of a program.
B) To skip the current iteration of a loop.
C) As a placeholder for code they intend to write later, to avoid syntax errors.
D) To make their code pass all tests. (If only it were that easy!)

77. What is the output of this code snippet?

```
msg = "hello"
msg.upper()
msg = msg + " world"
print(msg)
```

A) HELLO world
B) Hello world
C) hello world
D) HELLO WORLD

78. What will be the value of `mean`?

```
import statistics
data = (1, 2, 3, 4, '5')
try:
    mean = statistics.mean(data)
except TypeError:
    mean = "Error"
```

A) 3
B) 3.0
C) "Error"
D) The program crashes with a TypeError.

79. What's the output?

```
t = (1, 2, 3) * 2
L = [1, 2, 3] * 2
print(t[3] == L[3])
```

A) True
B) False
C) TypeError
D) IndexError

80. Which of the following cannot be a dictionary key?

A) A string
B) A tuple
C) An integer
D) A list

81. What is the value of the expression 5 * 1**2 + 3 // 2?

A) 7
B) 6
C) 13
D) 8.5

82. Predict the output:

```
s = 'abcdef'
print(s[5:1:-2])
```

A) 'fd'
B) 'fdb'
C) 'fd'
D) 'eca'

83. What is the output of the following code?

```
x = 10
y = 20
x, y = y, x
x = x - 10
y = y + 5
print(x, y)
```

A) 10 25
B) 20 15
C) 10 15
D) 20 25

84. Which line of code will raise a runtime error?

```
# Line 1
my_list = [1, 2, 3]
# Line 2
my_tuple = (1, 2, 3)
# Line 3
print(my_list[3])
# Line 4
print(my_tuple[2])
```

A) Line 1
B) Line 2
C) Line 3
D) Line 4

85. A programmer writes an infinite loop by mistake. The most common phrase they will utter upon discovering this is:

A) "Eureka! Perpetual motion!"
B) "It's not a bug, it's a feature."
C) "Oh, that's why my fan is so loud."
D) "Exactly as planned."

86. What is the final content of `my_dict`?

```
keys = ['a', 'b', 'c']
values = [1, 2]
my_dict = dict(zip(keys, values))
my_dict['c'] = 3
```

A) {'a': 1, 'b': 2}
B) {'a': 1, 'b': 2, 'c': None}
C) {'a': 1, 'b': 2, 'c': 3}
D) A ValueError is raised.

87. What will be printed?

```
i = 0
while i < 5:
    print(i, end=" ")
    i += 1
    if i == 3:
        break
else:
    print("done")
```

A) 0 1 2 done
B) 0 1 2 3 done
C) 0 1 2
D) 0 1 2 3 4 done

88. What is the output of `(None == 0, None is None, None == None)`?

A) `(True, True, True)`
B) `(False, True, True)`
C) `(False, False, True)`
D) `(True, False, False)`

89. What is the output of the following code?

```
t = ([1], [2])
L = t[0]
L.append(3)
print(t)
```

A) ([1], [2])
B) ([1, 3], [2])
C) ([1], [2], 3)
D) A TypeError is raised.

90. What is the result of `len("".join([]))`?

A) `0`
B) `1`
C) `2`
D) A `TypeError` is raised.

91. What is printed by the following code?

```
def mystery(s):
    return s.isalnum() or s.isspace()

print(mystery("Hello World"), mystery("
    HelloWorld1"), mystery("   "))
```

A) False True True
B) True True True
C) False False True
D) True False True

92. What is the output?

```
import math
print(int(math.pow(2, 3.5)))
```

A) 11
B) 11.31
C) 8
D) A ValueError is raised.

93. A developer wants to check if a string `s` starts with 'http' or 'https'. Which is the most efficient way?

A) `s.startswith('http') or s.startswith('htt`
B) `s.startswith(('http', 'https'))`
C) `s[0:4] == 'http'`
D) `s.find('http') == 0`

94. What is the value of `count` after this loop?

```
count = 0
for i in range(5):
    for j in range(i):
        count += 1
```

A) 25
B) 20
C) 15
D) 10

95. Which of these statements is syntactically incorrect in Python?

A) `x, y, z = 1, 2, 3`
B) `x = 1, 2, 3`
C) `x, y = 1, 2, 3`
D) `x = y = z = 1`

96. What is the median of the data `[10, 40, 20, 50]`?

A) `20`
B) `40`

C) `30`

D) `35`

97. What is the output of the following snippet?

```
a = [10, 20]
b = [10, 20]
c = a
print(a is b, a == b, a is c)
```

A) True True True

B) False True False

C) False True True

D) True False True

98. When a programmer says their code is ”elegant”, it usually means:

A) It’s written in cursive.

B) It uses very rare and obscure libraries.

C) It solves a complex problem in a simple, clear, and efficient way.

D) It has no comments, so its brilliance is self-evident.

99. What is the value of `L[0][1]` after this code executes?

```
L1 = [1, 2, 3]
L2 = L1[:]
L = [L1, L2]
L1[1] = 4
```

A) 2

B) 4

C) 3

D) 1

100. What does `random.randrange(10, 0, -2)` generate?

A) An even number from 2 to 10 inclusive.

B) An odd number from 1 to 9 inclusive.

C) An even number from 0 to 8 inclusive.

D) A `ValueError`.

101. What is the output of the code?

```
print('xyz'.find('y', 1, 2))
```

A) 1

B) -1

C) True

D) IndexError

102. You want to create a dictionary from a list of strings, where each string is a key and its length is the value. Which is the most ”Pythonic” way?

A) `d = {}; for s in L: d[s] = len(s)`

B) `d = {s: len(s) for s in L}`

C) `d = dict(zip(L, map(len, L)))`

D) All of the above are valid and reasonably Pythonic.

103. Which of the following is true about `del`?

A) It is a function that returns the deleted item.

B) It can only be used on lists.

C) It is a statement that can remove items from a list/dictionary or unbind a variable.

D) `del x[0]` is the same as `x.pop(0)`.

104. What is the result of `max("apple", "banana", key=len)`?

A) `'apple'`

B) `'banana'`

C) `6`

D) `KeyError`

105. What is the output?

```
d = {'a': 1, 'b': 2}
d.update(b=3, c=4)
print(d)
```

A) {’a’: 1, ’b’: 2, ’c’: 4}

B) {’a’: 1, ’b’: 3, ’c’: 4}

C) A SyntaxError

D) {’b’: 3, ’c’: 4}

106. What is the most significant difference between pseudocode and a flowchart?

A) Pseudocode is for simple logic, flowcharts are for complex logic.

B) Pseudocode is textual, while a flowchart is a graphical representation of logic.

C) Only flowcharts can show loops.

D) Pseudocode is language-specific.

107. What is the output?

```
print(1 > 2 == False)
```

A) True

B) False

C) 1

D) A SyntaxError because of operator chaining.

108. Which of the following concepts is NOT a fundamental part of the ”Introduction to Problem-solving” unit?

A) Developing an Algorithm

B) Testing and Debugging

C) Choosing a cloud provider

D) Analyzing the problem

109. What is the output of this final question?

```
import math
import random
# Don't worry, the exam is almost over
the_end_is_near = True
if the_end_is_near:
    # You did great!
    result = math.ceil(random.random())
else:
    # This won't happen
    result = math.floor(random.random())

print(result)
```

A) 0
B) 1
C) 0.0
D) 1.0

110. The primary fuel for a programmer is:

A) Logic and algorithms.
B) Electricity.
C) Unwavering self-confidence.
D) Coffee. (And sometimes pizza).

""""

111. What is the output of 'print(0.1 + 0.2 == 0.3)'?

A) True
B) False
C) Error
D) Depends on the Python version

112. What is the value of 'x' after this code executes?

```
x = [1, 2, 3]
x.append(x.pop(1))
```

A) '[1, 2, 3]'
B) '[1, 3, 2]'
C) '[2, 1, 3]'
D) '[1, 3]'

113. What is the output of the following?

```
s = "hello"
print(s.find('l', s.find('l') + 1))
```

A) 2
B) 3
C) -1
D) Error

114. What is the result of 'bool("False")'?

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

115. What is the output of the following code?

```
d = {'a': 1, 'b': 2}
d.setdefault('c', 3)
d.setdefault('a', 4)
print(d)
```

A) ''a': 1, 'b': 2, 'c': 3'
B) ''a': 4, 'b': 2, 'c': 3'
C) ''a': 1, 'b': 2, 'c': 3, 'a': 4'
D) Error

116. What is the output of 'print(2 * 3 ** 2)'?

A) 18
B) 36
C) 12
D) 64

117. What is the output of the following code?

```
t = (1, 2, 3)
t[1] = 4
print(t)
```

A) '(1, 4, 3)'
B) '(1, 2, 3, 4)'
C) Error
D) '(4, 2, 3)'

118. What is the output of 'print("hello".replace("l", "L", 1))'?

A) 'heLLo'
B) 'heLlo'
C) 'Hello'
D) 'heLLo'

119. What is the output of the following code?

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

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

120. What is the output of 'print(isinstance(1, float))'?

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

121. What is the output of the following code?

```
s = "a,b,c"
print(s.split(',', 1))
```

A) '['a', 'b,c']'
B) '['a', 'b', 'c']'

C) ‘[’a,b’, ’c’]‘
D) ‘[’a’, ’b c’]‘

122. What is the output of ‘print(1 == True)‘?

A) True
B) False
C) Error
D) ‘None‘

123. What is the output of the following code?

```
d = {'a': 1}
print(d.get('b', 0))
```

A) 1
B) 0
C) Error
D) ‘None‘

124. What is the output of ‘print(3 * ’abc’ + ’xyz’)‘?

A) ‘abcabcabcxyz‘
B) ‘abc xyz‘
C) ‘abc abc abc xyz‘
D) Error

125. What is the output of the following code?

```
a = {1, 2, 3}
b = {3, 4, 5}
print(a.union(b))`
```

A) ‘1, 2, 3, 4, 5‘
B) ‘1, 2, 3, 3, 4, 5‘
C) ‘3‘
D) ‘1, 2, 4, 5‘

126. What is the output of ‘print(int(”10”, 2))‘?

A) 10
B) 2
C) 4
D) 8

127. What is the output of the following code?

```
a = [1, 2, 3]
b = a[:]
print(a is b)
```

A) True
B) False
C) Error
D) ‘None‘

128. What is the output of ‘print(”Hello, World!”.partition(’,’))‘?

A) ‘(’Hello’, ’,’, ’ World!’)‘
B) ‘[’Hello’, ’,’, ’ World!’]‘
C) ‘(’Hello’, ’ World!’)‘
D) ‘(’Hello,’, ’ ’, ’World!’)‘

129. What is the output of the following code?

```
a = 1
def my_func():
    a = 2
    print(a)
my_func()
print(a)
```

A) 2 2
B) 2 1
C) 1 2
D) 1 1

130. What is the output of ‘print(float(’inf’) ¿ 1e308)‘?

A) True
B) False
C) Error
D) ‘None‘

131. What is the output of the following code?

```
a = [1, 2, 3]
del a[1:]
print(a)
```

A) ‘[1]‘
B) ‘[2, 3]‘
C) ‘[1, 2]‘
D) ‘[1, 3]‘

132. What is the output of ‘print(’abc’.rjust(5, ’*’))‘?

A) ‘**abc‘
B) ‘abc**‘
C) ‘*abc*‘
D) ‘abc‘

133. What is the output of the following code?

```
a = {1, 2}
b = {1, 2, 3}
print(a.issubset(b))
```

A) True
B) False
C) Error
D) ‘None‘

134. What is the output of ‘print(complex(2, 3) * complex(3, 2))‘?

A) ‘(0, 13)‘
B) ‘(12, 13j)‘
C) ‘(0 + 13j)‘
D) ‘13j‘

135. What is the output of the following code?

```
a = [1, 2, 3]
b = [4, 5, 6]
print(a + b)
```

A) '[1, 2, 3, 4, 5, 6]'
B) '[5, 7, 9]'
C) '[[1, 2, 3], [4, 5, 6]]'
D) Error

136. What is the output of 'print(round(2.5))'?

A) 2
B) 3
C) 2.0
D) 3.0

137. What is the output of the following code?

```
a = "hello"
print(a.zfill(8))
```

A) '000hello'
B) 'hello000'
C) '00hello0'
D) 'hello'

138. What is the output of 'print(1 != True)'?

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

139. What is the output of the following code?

```
a = [1, 2, 3]
a.clear()
print(a)
```

A) '[]'
B) 'None'
C) '[0, 0, 0]'
D) Error

140. What is the output of 'print(0 or 1)'?

A) 0
B) 1
C) True
D) False

141. What is the output of the following code?

```
a = [1, 2, 3]
b = a.copy()
b[0] = 4
print(a)
```

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

142. What is the output of 'print(2 and 3)'?

A) 2
B) 3
C) True
D) False

143. What is the output of the following code?

```
a = "hello"
print(a.endswith("o"))
```

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

144. What is the output of 'print(1 ¡ 2 ¡ 3)'?

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

145. What is the output of the following code?

```
a = [1, 2, 3]
print(a.pop())
```

A) 1
B) 2
C) 3
D) '[1, 2]'

146. What is the output of 'print(not 0)'?

A) True
B) False
C) 1
D) -1

147. What is the output of the following code?

```
a = "hello"
print(a.find("z"))
```

A) 0
B) -1
C) Error
D) 'None'

148. What is the output of 'print(1 is 1.0)'?

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

149. What is the output of the following code?

```
a = [1, 2, 3]
a.reverse()
print(a)
```

A) '[3, 2, 1]'
B) '[1, 2, 3]'
C) 'None'
D) Error

150. What is the output of 'print(1 and 0)'?

A) 1
B) 0
C) True
D) False