

Department of Computer Science Engineering, GCET, Kashmir, Spring-2025
Python Programming Tutorial-I (86-Marks) (21-04-2025), Venue: CS1

A. Short Answer Questions (50-Marks)

1. What is Python?
2. Name three data types in Python.
3. What is the difference between a list and a tuple in Python?
4. How do you write a single-line comment in Python?
5. What is the purpose of the `range()` function in Python?
6. Explain the difference between `=` and `==` in Python.
7. What will be the output of `print(type(42))`?
8. How do you create a dictionary in Python?
9. What does the `len()` function do?
10. How do you take user input in Python?

B. Multiple Choice Questions (MCQs)(09-Marks)

1. Which of the following is used to define a function in Python?
 - a. define
 - b. def
 - c. function
 - d. lambda
2. What will `print(3 * "Python")` output?
 - a. PythonPythonPython
 - b. 3Python
 - c. Python 3 times
 - d. None of the above
3. Which of the following is NOT a Python data type?
 - a. List
 - b. Tuple
 - c. Dictionary
 - d. Array
4. Which of the following methods is used to add an item to a list in Python?
 - a. `insert()`
 - b. `append()`
 - c. `add()`
 - d. `push()`
5. What will `print("Python"[:-1])` output?
 - a. Python
 - b. No output
 - c. nohtyP
 - d. None of the above
6. How do you check the data type of a variable in Python?
 - a. `typeof(variable)`
 - b. `checktype(variable)`
 - c. `type(variable)`
 - d. `datatype(variable)`
7. What does `len(["apple", "banana", "cherry"])` return?
 - a. 2
 - b. 3
 - c. 1
 - d. None of the above
8. How do you start writing a comment in Python?
 - a. `//`
 - b. `#`
 - c. `/*`
 - d. `"Comment"`
9. What is the correct way to create a dictionary in Python?
 - a. `{1, 2, 3}`
 - b. `{1: "one", 2: "two", 3: "three"}`
 - c. `[1, 2, 3]`
 - d. `(1, 2, 3)`

C. True/False Questions(09-Marks)

1. Python is a compiled language. (True/False)
2. The `while` loop will always execute at least once. (True/False)
3. Strings in Python are mutable. (True/False)
4. The `elif` statement is required in every `if` block. (True/False)
5. Python allows multiple inheritance. (True/False)
6. The `continue` statement in a loop skips the rest of the current iteration and moves to the next one. (True/False)
7. In Python, the `range()` function generates a list. (True/False)
8. The `import math` statement is used to include the `math` module in Python. (True/False)
9. Python allows you to create anonymous functions using `lambda`. (True/False).

D. Fill in the Blanks(08-Marks)

1. The keyword used to exit a loop prematurely in Python is _____.
2. Python uses _____ indentation to indicate blocks of code.
3. The _____ function is used to take user input in Python.
4. To check the length of a list, we use the _____ function.
5. The operator used for exponentiation in Python is _____.
6. The _____ loop is used to iterate over a sequence such as a list or a string.
7. In Python, the _____ statement is used to terminate a function and return a value.
8. The _____ operator is used for checking membership in lists, tuples, and dictionaries.

E. Syntax Check Questions (10- Marks)

1. Identify the error in the following code snippet:
`print "Hello, World!"`
2. Identify the mistake in the list declaration below:
`my_list =`
3. Identify the mistake in the following list declaration:
`my_list = [1, 2, 3, 4, 5)`
4. What will happen if you forget the colon (`:`) after an `if` statement?
5. Find the error in this function definition:
`def greet(name) print("Hello, " + name)`
6. What's wrong with this dictionary syntax?
`my_dict = {1, "one", 2, "two", 3, "three"}`
7. Why will this loop cause an error?
`while x < 5 print(x)`
8. Correct the syntax error in this list comprehension:
`squares = [x * x for x in range(10) if x % 2 = 0]`
9. Identify the issue in this class definition:
`class Car: def __init__(self, model): self.model = model`
10. What will happen if we use an undefined variable inside a function without declaring it first?