

Python Programming Test

Time: 2 Hours

Total Marks: 50

Instructions:

- Attempt **all** sections.
- Use Python 3 syntax.
- Write properly indented and readable code.

Section A: MCQs (10 Marks)

Attempt all questions.

(10 × 1 = 10 marks)

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

- a) 2value
- b) value_2
- c) value-2
- d) class

2. What is the return data type of the input() function?

- a) int
- b) float
- c) string
- d) boolean

3. Which operator is used for exponentiation in Python?

- a) ^
- b) Γ * *
- b) %
- c) //

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

```
print(type(10.5))
```

- a) int
- b) float

- c) double
 - d) str
5. Which keyword is used to define a function in Python?
- a) function
 - b) define
 - c) def
 - d) fun
6. Which loop is best when the number of iterations is known?
- a) while
 - b) for
 - c) do-while
 - d) infinite
7. Which operator is used to check equality?
- a) =
 - b) !=
 - c) ==
 - d) i=
8. Which statement is used for decision making in Python?
- a) loop
 - b) if
 - c) def
 - d) print
9. What is the default return value of a function if no return statement is used?
- a) 0
 - b) None
 - c) False
 - d) Error
10. Which keyword allows modification of a global variable inside a function?
- a) local
 - b) modify
 - c) global
 - d) static

Section B: Short Questions (20 Marks)

(5 × 4 = 20 marks)

1. What is a variable in Python? Explain with an example.
2. Explain any four Python data types with examples.
3. Differentiate between a for loop and a while loop.
4. Explain the if-elif-else statement with a simple example.
5. Differentiate between local scope and global scope.

Section C: Practical / Coding (20 Marks)

(4 × 5 = 20 marks)

Q1

Write a program that takes a number from the user and checks whether it is **positive, negative, or zero**.

Q2

Write a program using a for loop to print the **first 10 even numbers**.

Q3

Write a function named `square()` that:

- takes one argument
- returns the square of the number
- calls the function and prints the result

Q4

Analyze the following code:

```
x = 10
```

```
def show():  
    x = 5  
    print(x)
```

```
show()  
print(x)
```

- What will be the output?
- Which variable is local and which is global?