

# 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.**

( $10 \times 1 = 10$  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)  $\Gamma * *$
  - 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?