Ramaiah Institute of Technology
(Autonomous Institute, Affiliated to VTU)

Data Visualization using Python Lab

Academic year 2025 - 2026

Lab Practice Test - II

Section A: Multiple Choice Questions (MCQ)

Q1. What will be the output of the following code?

```
list(map(lambda x: x*x, [1, 2, 3]))
```

A. `[1, 4, 9]`
B. `[1, 2, 3]`
C. `1 4 9`
D. `None`

Q2. What is the main purpose of `filter()` function in Python?

A. Filters out elements based on a condition
B. Sorts the list
C. Removes duplicates
D. Maps elements to new values

Q3. What is the output of the following code?

```
from functools import reduce
reduce(lambda x, y: x + y, [1, 2, 3, 4])
```

A. `10`
B. `[1, 2, 3, 4]`
C. `24`
D. `None`

Q4. What does a decorator in Python do?

A. Increases execution time
B. Adds functionality to an existing function
C. Modifies variables globally
D. Removes docstrings from functions

Q5. Choose the valid higher-order function:

A. `print()`
B. `input()`
C. `map()`
D. `len()`

Section B: Coding Questions

Q6. Write a `lambda` function to compute the square of a number and apply it to list `[5, 6, 7]` using `map`.

Q7. Use `filter()` to get all even numbers from the list `[1, 2, 3, 4, 5, 6]`.

Q8. Use `reduce()` to compute the product of the list `[2, 3, 4]`.

Q9. Write a decorator `@log` that prints `"Function is being called"` before executing a function.

Q10. Write a higher-order function `apply_twice` that takes a function and an argument and applies the function twice.