

Data Visualization using Python Lab

Academic year 2025 - 2026

Lab Practice Test - I

Section 1: Multiple Choice Questions (MCQs)

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

```
x = [1, 2, 3]
y = x
y.append(4)
print(x)
```

- a) [1, 2, 3]
- b) [1, 2, 3, 4]
- c) [1, 2, 3] and [1, 2, 3, 4]
- d) Error

2. What is the correct way to open a file in Python for reading?

- a) `open('file.txt', 'r')`
- b) `open('file.txt', 'w')`
- c) `open('file.txt', 'rb')`
- d) `open('file.txt', 'wb')`

3. What will `type(5/2)` return in Python 3?

- a) `int`
- b) `float`
- c) `double`
- d) `complex`

4. What is the output of the following code?

```
print(bool([]), bool(''), bool(0), bool(None))
```

- a) False False False False
- b) True True True True
- c) False False False True
- d) True True False False

5. What does `list(range(3, 10, 2))` return?

- a) [3, 5, 7, 9]
- b) [3, 5, 7]
- c) [3, 4, 5, 6, 7, 8, 9]
- d) [3, 6, 9]

Section 2: Fill in the Blanks

- In Python, a variable inside a function is _____ unless specified otherwise using the `global` keyword.
- _____ is used to iterate over sequences such as lists, tuples, and strings.
- The _____ function is used to get the length of a list or string.
- _____ keyword is used to define an anonymous function in Python.
- To remove an element from a list by value, we use _____, whereas to remove an element by index, we use _____.

Section 3: Coding Questions

- Write a Python function to check if a number is **even or odd**.
- Write a Python program to **find the sum of all elements** in a list.
- Write a Python function that **returns the factorial** of a given number.
- Write a Python program to **find the largest number in a list**.
- Write a Python program to **reverse a string without using the built-in reverse function**.

Section 4: Debugging

- a. Find the error in the following code and fix it:

```
def sum_numbers(a, b)
    return a + b
print(sum_numbers(3, 5))
```

- b. What will be the output of the following code, and how can it be corrected?

```
list1 = [1, 2, 3]
print(list1[3])
```

- c. Identify and fix the issue in this loop:

```
for i in range(5, 1):
    print(i)
```

Section 5: Logical Thinking

- a. Write a Python program to print **Fibonacci series** up to **n** terms.
b. Write a Python program to **check if a given string is a palindrome**.