GLS UNIVERSITY FACULTY OF COMPUTER APPLICATIONS & IT
IMScIT SEM 5
221601505 PRACTICALS ON PYTHON
UNIT– 3 LAB TASK

Practical Assignment – Functions (20 Questions)

Basic Functions

1. Write a Python function to calculate the factorial of a number. Call the function for multiple test cases.
2. Write a function to find the largest of three numbers.
3. Write a function to check whether a given number is prime or not.
4. Write a function that takes a list of numbers as input and returns the sum of all numbers.
5. Write a function that takes a string as input and returns the number of vowels in it.

Default & Keyword Arguments

6. Write a function to calculate simple interest where the rate of interest has a default value of 5%.
7. Write a function to greet a person by name, with a default greeting message if no name is given.
8. Write a function to display student details (name, age, course) using keyword arguments.

Variable-Length Arguments

9. Write a function using *varargs to calculate the average of any number of numeric arguments.
10. Write a function using **varargs to print employee details like name, department, and salary.

Lambda Functions

11. Write a Python program using lambda to calculate the cube of a given number.
12. Write a Python program using lambda to filter all even numbers from a given list.

Return & Generators

13. Write a function that takes two numbers and returns both their sum and difference.
14. Write a generator function that yields the square of numbers from 1 to 10.

Mixed Concepts

15. Write a function to accept a sentence and return a dictionary containing each word and its frequency.

16. Write a program that uses a lambda function and *args together to multiply all given numbers by 2.