GLS University
Faculty of Computer Application and Information Technology
MCA – Semester – I

Web Development Using Python Framework (230701106)

Python Practical Exam Paper Set 1 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the sum of all even numbers between 1 and 100.
2. Write a python program to create a function that calculates the factorial of a positive integer. Hint: factorial of a number: n! = n * (n-1) * (n-2)*…..*1
3. Write a python program that takes user input for an integer and handles exceptions if the input is not a valid integer.
4. Write a python program to define a class called **Rectangle** with attributes **length** and **width**. Implement a method to calculate the area of the rectangle.
5. Write a python program to create multiline string and do the following operation:
    a. Using the slicing method, display string from the 2nd line.
    b. Remove whitespace from end of the string and display the output.
    c. Convert string into list of words and display the output.
    d. Check if “python” word present in the string and display the output.
    e. Create another string variable with 3 placeholders ‘{}’ and using format string methods replace the placeholders.

GLS University
Faculty of Computer Application and Information Technology
MCA – Semester – I

Web Development Using Python Framework (230701106)

Python Practical Exam Paper Set 2 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a Python program to find the sum of all prime numbers between 1 and 50. Hint: A prime number is a whole number greater than 1 whose only factors are 1 and itself.
2. Write a python program to create a function that takes a list of strings and returns the longest string in the list.
3. Write a python program that open a text file and handles exceptions if the file doesn't exist.
4. Write a python program to define a class called **Circle** with an attribute **radius**. Implement methods to calculate the area and circumference of the circle. Hint: area = PI * $(radius)^2$ and circumference = 2 * PI * radius
5. Write a python program to create a list of 12 elements containing various data types and do the following operations:
    a. Using the range of indexes method, display the list starting from 3^{rd} position to 8^{th} position.
    b. Remove the 10^{th} position item and insert new item at position 5^{th} position and display the output.
    c. Create new list with 5 elements and append this list to last one and display the output.
    d. Create new list of fruits and using the list comprehension method, display the new list of fruit names with contain character ‘a’ in it.

GLS University
Faculty of Computer Application and Information Technology
MCA – Semester – I
Web Development Using Python Framework (230701106)

Python Practical Exam Paper Set 3 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the first 10 terms of the Fibonacci sequence.
2. Write a python program to create a Python function that checks if a string is a palindrome. Hint: A palindromic number is a number that remains the same when its digits are reversed
3. Write a python program to handle multiple exceptions (ZeroDivisionError and FileNotFoundError) in the same try-except block.
4. Write a python program to define a Python class called **Person** with attributes **name** and **age**. Implement a method to display the person's details.
5. Write a python program to create a tuple of 5 elements containing various data types and do the following operations:
    a. Using the range of indexes method, display the tuple starting from 3rd position.
    b. Remove the item from 2nd position and display the output.
    c. Create 3 variables and assign values from tuple. Display the variables values.
    d. Create new tuple with 2 elements and join it. Display the joined tuple.
    e. Multiply each element by 2 and create a new tuple.

GLS University
Faculty of Computer Application and Information Technology
MCA – Semester – I
Web Development Using Python Framework (230701106)

Python Practical Exam Paper Set 4 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the sum of all numbers from 1 to 100 that are divisible by both 3 and 5.
2. Write a python program to create a function that takes a list of integers and returns a new list with only the even numbers.
3. Write a python program to use the else block to execute code when no exception is raised.
4. Write a python program to define a class called **Car** with attributes **make**, **model**, and **year**. Implement a method to display the car's details.
5. Write a python program to create a dictionary of 5 key-value pairs and do the following operations:
    a. Display the keys and values from it.
    b. Update the key ‘name’ and remove last pair. Display the output.
    c. Copy the dictionary into new variable and clear the previous dictionary variable. Display the output.
    d. Create nested dictionary with name ‘student_info’ and display the name and age.

Python Practical Exam Paper Set 5 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to generate the first 10 square numbers (1, 4, 9, 16, ...).
2. Write a python program to create a function that finds the largest element in a list of numbers.
3. Write a python program to use the **finally** block to execute code when exception is raised.
4. Write a python program to define a class called Book with attributes title, author, and publication_year. Implement a method to display the book's details.
5. Write a python program to generates a multiplication table from 1 to 5 using nested loops.