

Date:

Registration number:

ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27

II SEMESTER-OPEN ELECTIVE

SEMESTER EXAMINATION: APRIL 2022

(Examination conducted in July 2022)

**CS OE 4 - Python Programming Concepts**

Time- 2 hrs Max Marks-60

This question paper contains TWO printed pages and TWO parts

**Part A**

**Answer all questions 2X10=20**

1. What are the different types of comments in python?
2. What is Indentation?
3. Explain variable assignment with suitable example.
4. Write a python program that finds the factorial of a natural number n.
5. Give the output of following Python code:

 l=[(x, y)

 for x in [1,2,3]

for y in [3,1,4]

 if x != y]

 print l

1. What is variable assignment? Give suitable example.
2. What are classes and objects?
3. What is encapsulation?
4. What is Inheritance? Mention the types of inheritance.
5. What is a constructor? Give the syntax for declaring a constructor.

**Part B**

**Answer any 8 questions 5x8=40**

1. What are the features and applications of Python?
2. Explain the different types of operators in python language.
3. Implement the python program to calculate total and average marks based on input.
4. Explain while loop & for loop with syntax and example in detail.
5. Define function. Write its syntax . What are formal and actual arguments?
6. What is list in Python? Demonstrate use of any three methods of list.
7. What is dictionary in Python? Explain any four built-in dictionary methods with example.
8. Consider the list lst=[9,8,7,6,5,4,3].

Write the Python program which performs the following operation using built-in methods.

1) Insert element 10 at beginning of the list.

2) Insert element 2 at end of the list.

3) Delete the element at index position 5.

4) Print all elements in reverse order.

19. Is String a mutable data type? Also explain the string operations length, indexing and slicing in detail with an appropriate example.

20. Create a class Employee with data members: name, department and salary. Create suitable methods for reading and printing employee information.

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*