ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU -27
BCA (DATA ANALYTICS)– III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2022
(Examination conducted in December 2022)
BCADA3122– PYTHON FOR DATA SCIENCE

Time: 2 Hours   **Max Marks: 60**
This paper contains 3printed pages and 3 parts

PART-A

Answer all questions   **10x1=10**

1. Which type of Programming does Python support?
   a) object-oriented programming
   b) structured programming
   c) functional programming
   d) all of the mentioned

2. Which of the following is the correct extension of the Python file?
   a) .python
   b) .pl
   c) .py
   d) .p

3. What will be the value of the following Python expression "4 + 3 % 5" ?
   a) 7
   b) 2
   c) 4
   d) 1

4. Which of the following statements is used to create an empty set in Python?
   a) ( )
   b) [ ]
   c) { }
   d) set()

5. To add a new element 5 to a list we use which Python command?
   a) list1.addEnd(5)
   b) list1.addLast(5)
   c) list1.append(5)
   d) list1.add(5)

6. Which one of the following is the use of function in python?
   a) Functions don't provide better modularity for your application
   b) you can't also create your own functions
   c) Functions are reusable pieces of programs
   d) All of the mentioned

BCADA3122_B_O_22

7. Amongst which of the following is a correct syntax for panda's dataframe?
    a) pandas.DataFrame(data, index, dtype, copy)
    b) pandas.DataFrame(data, index, columns, dtype, copy)
    c) pandas.DataFrame(data, index, rows, dtype, copy)
    d) None of the above

8. Suppose d = {"john":40, "peter":45}. To obtain the number of entries in dictionary which command do we use?

    a) d.size()

    b) len(d)

    c) size(d)

    d) d.len()

9. Which function overloads the >> operator?

    a) __more__()

    b) __gt__()

    c) __ge__()

    d) none of the mentioned

10. Suppose t = (1, 2, 4, 3), which of the following is incorrect?

    a) print(t[3])

    b) t[3] = 45

    c) print(max(t))

    d) print(len(t))

PART –B
Answer any four questions   4X5=20

11. Define classes and object. With suitable example show how to create class and object in Python.

12. How tuple is different from sets. Explain with example.

13. Explain any four statistical functions in NumPy.

14. Write a note on Dataframes.

15. Illustrate the relevance of regular expression with examples.

16. Write a program to illustrate aggregation in python.

PART- C
Answer any three questions   3X10=30

17. a) With suitable example explain the different numeric datatypes available in python.
    b) Define constructor? How constructor is different from destructor?

18. "Inheritance provides code reusability" Justify your answer by giving example for different type of inheritance.

19. a) Explain ndarrays in NumPy. Give suitable example.
    b) Write a note on data wrangling.

20. Create a class called library with data attributes like acc_number, publisher, title and author. The methods of the class should include
    a) read() – acc_number, title, author.
    b) compute() - accept the number of days late, calculate the fine charged at the rate of Rs. 2 per day.
    c) display() – print all the data.