



**ST. JOSEPH'S UNIVERSITY, BENGALURU -27**  
**BCA (DATA ANALYTICS) – III SEMESTER**  
**SEMESTER EXAMINATION: OCTOBER 2023**  
**(Examination Conducted in November/December 2023)**  
**BCADA 3122 – PYTHON FOR DATA SCIENCE**  
**(For current batch students only)**

Time: 2 Hours

This paper contains TWO printed pages and THREE parts

Max Marks: 60

**PART A****Answer All the questions****5 X 2 =10**

- 1 Give an example for multiline statement.
- 2 List the difference between list and ndarray
- 3 What will be the output of following code?  

```
import pandas as pd
Series1 = pd.Series([10,20,30,40,50])
Series2 = Series1*2
print(Series1)
print(Series2)
```
- 4 What do you mean by regular expression?
- 5 Mention the python libraries for visualization

**PART B****Answer any FIVE questions****5 X 4 =20**

- 6 Explain the `__init__()` and `__str__()` method
- 7 Write a program to illustrate positional and default arguments in python
- 8 Write a note on data wrangling
- 9 How to create and access 2 D array. Give an example
- 10 Mention the role of visualization in data analysis
- 11 How to create Pandas DataFrame Using Python Dictionary and list
- 12 Whether string is mutable? Justify your answer

**PART C****Answer Any THREE questions****3 X 10 = 30**

- 13 With code segment explain the if and looping statements available in python  
10
- 14(a) What will be the output of the following.  
Consider the tuple `tup=(1,3,2,4,5)`  
i) `print(tup[-2])`                      ii) `print(len(tup))`                      iii) `print(sorted(tup))`                      7  
iv) `print(max(tup),min(tup))`                      v) `print(tup[2:4])`                      vi) `print(3*tup)`                      vii) `tup[0]=99;print(tup)`
- (b) Consider the dictionary where the keys are five students register number and values are their name. Perform the following operations  
i) `pop()`                      ii) `update()`                      iii) `keys()`                      3

- 15(a) Consider the array, `array1 = np.array([1, 2, 3, 4, 5])` . Write the python syntax to compute the following 6
- i) `mean()`    ii) `std()`    iii) `min()`    iv) `max()`    v) `median`
- (b) Define inheritance? List the types of inheritance supported by python. Write a program to illustrate single inheritance in python 4
- 16(a) Show how to add, subtract and divide two Pandas Series 5
- (b) How to do grouping in Python? Give an example 5