



QP CODE: 25050799



Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc Computer Science (Data Analytics)

Core Courses - CA030105 - PYTHON PROGRAMMING FOR ANALYTICS

2020 Admission Onwards

7B8A028D

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Describe with example the loops in Python.
2. What are functions in Python? Give an example.
3. Differentiate between Pandas data structures : Series and DataFrames.
4. Describe the row or column-wise function application in Pandas?
5. How many types of indexes are there in Python?
6. Explain with example how to check for missing values in Pandas.
7. What are the basic functions of matplotlib?
8. How to customize colorbars in Matplotlib?
9. List out some popular models provided by scikit-learn.
10. What is supervised learning? List some Supervised Learning algorithms.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. What is a class? How to define class in python?
12. Explain the feature of Inheritance in python with an example.
13. Explain with example (i). Creating a NumPy array with defined datatype. (ii). Converting datatype on existing arrays.
14. Explain in detail about Python Files, its types, functions ?





15. Explain with example any 5 built-in aggregate methods of Pandas objects.
16. Briefly explain query() in high performance Pandas.
17. Describe the histogram?How to plot data on histogram?
18. Illustrate 3 types of regression algorithms?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. What are the various mutable and immutable data types in Python?
20. Explain with example how to sort Pandas objects.
21. List out the objectives of Pandas time series analysis.
22. Explain the ways for creating three dimensional plotting in Matplotlib.

(2×5=10 weightage)

