

QP CODE: 25047393



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025

Third Semester

M Sc OPERATIONS RESEARCH AND COMPUTER APPLICATIONS

Core Course - CE020304 - DATA ANALYTICS USING PYTHON

2019 ADMISSION ONWARDS

8DA75999

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. How could we define and use a variable in Python? Explain with an example.
2. Python is an interpreted language. Justify your answer.
3. What you mean by pandas series?
4. Describe the use of pandas's Index objects.
5. How can we combine Data contained in pandas objects ?
6. List Different join types and their behaviour.
7. What is the method used to save the active figure to file in matplotlib?
8. Clarify the importance of matplotlib in data analysis.
9. Define pivot table.
10. What you mean by time series data?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. "Python is the most preferable language for data analysis". Justify this statement.
12. Write a note on Numpy and Scipy.
13. What are the Data Types for ndarrays?
14. What are the Basic array statistical methods?
15. Describe the methods to combine Data contained in pandas objects.





16. Give an example for merge function in pandas.
17. Describe the plot decoration methods.
18. Differentiate between Downsampling and Upsampling.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain python libraries and data structures.
20. Compare the Data structures of Numpy and Pandas.
21. Explain Reading and Writing Data in Text Format in Pandas.
22. Explain in detail data wrangling process.

(2×5=10 weightage)

