



QP CODE: 24045686



24045686

Reg No : .....

Name : .....

**M.Sc DEGREE (CSS) EXAMINATION, DECEMBER 2024**

**First Semester**

M.Sc COMPUTER SCIENCE (DATA ANALYTICS)

**CORE - CA030105 - PYTHON PROGRAMMING FOR ANALYTICS**

2020 ADMISSION ONWARDS

E6929E5C

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight 1 each.*

1. What is the lambda function?
2. What is dictionary in Python explain with an example?
3. Give an example for Numpy condition array.
4. Differentiate between Pandas module and NumPy module in Python.
5. What are the different functions that can be used by groupby() in Pandas?
6. What is Pivot Table? How to create pivot table in Python using Pandas? Give example.
7. What is histogram? Define density in Matplotlib Histogram.
8. What is contour plot in Python?
9. Define scikit-learn library . What are its advantages?
10. Differentiate between training set and testing set data.

(8×1=8 weightage)

**Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight 2 each.*

11. Write a Python program to find all prime numbers upto a given range.
12. What is a class? How to define class in python?
13. Explain Nddarray. How to create an Nddarray?





14. What is a structured array? Explain with example how to create it.
15. How to set a column in a dataframe as an index?
16. What is the use of isnull() and notnull()?
17. Differentiate between Matplotlib Contour plots and density plots.
18. What is the difference between SVM and SVR?

(6×2=12 weightage)

**Part C (Essay Type Questions)**

*Answer any **two** questions.*

*Weight 5 each.*

19. List the features and explain about different Object Oriented features supported by Python.
20. Explain with example how to sort Pandas objects.
21. List out the objectives of Pandas time series analysis.
22. What is a plot legend? Why and how it is necessary?

(2×5=10 weightage)

