QP CODE: 23145667

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Reg No : .....

Name : .....

M Sc DEGREE (CSS) EXAMINATION, DECEMBER 2023

First Semester

M.Sc.Computer Science (Data Analytics)

CORE - CA030105 - PYTHON PROGRAMMING FOR ANALYTICS

2020 ADMISSION ONWARDS

F07B4452

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Describe with example the branching statements in Python
2. How to create empty class in Python?
3. Find out the mean,median and standard deviation of a given NumPy array. ([10,20,30,40,50,60])
4. What are attributes of Rank() and what are used for?
5. What is time series in Pandas?
6. What are the main objectives of high performance Pandas?
7. Write short notes on different customization options available with any plot.
8. What is contour plot in Python?
9. List out any classification algorithms in machine learning.
10. What is PCA decomposition?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Define recursion in Python?What are the advantage and disadvantage of recursion?
12. Write in brief about Tuple in python. Write operations with suitable examples.

13. What advantages do NumPy arrays offer over Python lists?

14. Explain with example how to read and write array data on files.

15. How to set a column in a dataframe as an index?

16. How to handle missing data in python using pandas?

17. What are the three main architecture layers of matplotlib?

18. Explain Linear Regression with a suitable examole

(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 use Pandas function applications. (i). pipe() (ii). apply() (iii). applymap()

21. Expalin with example the ways of combining datasets in Pandas.

22. What are the various Matplotlib plotting techniques? Explain each with an example.

(2×5=10 weightage)