QP CODE: 23003345

23003345

Reg No : .....

Name : .....

M Sc DEGREE (CSS) EXAMINATION, APRIL 2023

First Semester

M.Sc.Computer Science (Data Analytics)

CORE - CA030105 - PYTHON PROGRAMMING FOR ANALYTICS

2020 ADMISSION ONWARDS

EF0F766A

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is meant by abstract class?
2. What do you mean by raising an exception? Give example
3. What are the various ways of creating NumPy arrays from scratch?
4. How to access the first and last n entries of a Pandas dataframe?
5. Define the ways for creating DataFrames in Python using (i). List (ii). Dict
6. Why indices and column labels important in Panda?
7. Define Matplotlib
8. What is histogram? Define density in Matplotlib Histogram
9. Define Clustering.Name any one clustering algorithm.
10. How to implement K means algorithm in Python?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Write in brief about Set in python.Write operations with suitable examples.
12. Use of re module with Example

13. Show indexing and slicing with different data type structures

14. What is a structured array? Explain with example how to create it.

15. What is hierarchical indexing? How would you use this?

16. Explain with example any 5 built-in aggregate methods of Pandas objects

17. Clarify the situations when you need to use bar() charts and when you need to use hist() chart?

18. Illusrate 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 different control statements available in Python? Explain with suitable examples.

20. Explain with example how to sort Pandas objects.

21. Explain with example the use of various vectorized string operations in Pandas

22. What is a plot legend? Why and how it is necessary?

(2×5=10 weightage)