

24U2129

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Name :

Reg. No :

SECOND SEMESTER B.Voc. DEGREE EXAMINATION, APRIL 2025

(CBCSS-UG)

(Regular/Supplementary/Improvement)

CC21U SDC2 DS06 - DATA SCIENCE WITH PYTHON

(Information Technology - Skill Component Course)

(2021 Admission onwards)

Time: 2.5 Hours

Maximum: 80 Marks

Credit: 4

Part A (Short answer questions)

Answer **all** questions. Each question carries 2 marks.

1. What is Model?
2. What is Data Cleansing?
3. What is Purposive or judgmental sampling?
4. What is Poisson distribution?
5. What is Supervised Learning?
6. List the NumPy standard data types.
7. How to reshape an array?
8. What is the difference between np.argsort() and np.argpartition()?
9. What is the use of ignore_index flag?
10. What is the difference between pandas' series object and numpy array?
11. List the useful methods for detecting null data
12. What is the use of Numexpr library?
13. Define savefig() command.
14. What is a scatter plot?
15. What is the difference between plt.scatter and plt.plot?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer **all** questions. Each question carries 5 marks.

16. Explain Exploratory Data Analysis.
17. Define Cluster analysis and Partitioning method.

18. What is K-NN and how can I determine a good value for K?
19. What is Linear regression and multiple linear regression?
20. Define fancy indexing.
21. Explain about the different categories of joins.
22. Explain Data Selection in series.
23. Explain about the hierarchical indexing.

(Ceiling: 35 Marks)

Part C (Essay questions)

Answer any *two* questions. Each question carries 10 marks.

24. What is array and explain the different ways to create a numpy array?
25. Explain aggregation functions in numpy.
26. Explain Aggregation and Grouping in Pandas.
27. Explain string operation in pandas.

(2 × 10 = 20 Marks)
