


RAN-2508000603022001

B. Com. (NCF-NEP) (Sem.-III) Examination November - 2025
Major - Python Libraries For Data Analytics: Numpy, Pandas (Theory)

[Total Marks: 25

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
 Fill up strictly the above details on your answer book

Seat No.:

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Student's Signature

Q.1. Answer the following in one sentence (any 5)
5

1. What is NumPy used for in Python?
2. What is the difference between zeros() and ones() functions?
3. What is the transpose of a matrix?
4. What is a difference between arrange() and linspace()?
5. What are the most common NumPy data types?
6. What is a dictionary in Python?
7. What is negative indexing in a NumPy array?
8. Which function displays the first 5 rows of a DataFrame?

Q.2. Answer the following: (Each question carry 5 mark)
10

- A. Explain the difference between NumPy arrays and Python lists with two examples.
- B. Explain the use of NumPy statistical methods — mean, median, mode, variance, and standard deviation.

OR

- A. Explain matrix addition and multiplication in NumPy with examples.
- B. How to read and write data using CSV and Excel file? Give proper example.

Q.3. Answer the following (Any 2)
10

1. Differentiate between: (1) Numpy array and Pandas Series (2) Array and list.
2. What is a Pandas Series? Explain with creation from scalar values, NumPy arrays, and dictionaries.
3. Explain joining, merging, and concatenating DataFrames with examples.
4. Write a program to access DataFrame rows using loc() and iloc().