

RAN-2508000603022001

Bachelor of Commerce (NCF-NEP) (Sem.- III) Examination March - 2026
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.: <table border="1" style="width: 100%; height: 30px; border-collapse: collapse;"> <tr> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table> Student's Signature						

- Q.1. Answer the following in one sentence (any 5) 5**
1. What is NumPy used for in Python?
 2. What are the most common NumPy data types?
 3. List the advantages of NumPy over Python lists.
 4. Define slicing in NumPy with a small example.
 5. What is a use of ones() of Pandas?
 6. What is the purpose of the zeros() function?
 7. Which function is used to find the transpose of a matrix?
 8. Which function displays the first 5 rows of a Data Frame?
- Q.2. Answer the following: (Each question carry 5 mark) 10**
- A. Write a program to create a NumPy array from a list and perform addition operations on it.
 - B. Explain mean, variance, and standard deviation using NumPy functions.
- OR**
- A. Write a program to access DataFrame rows using loc() and iloc().
 - B. Explain: head(), Tail(), count() with examples.
- Q.3. Answer the following (Any 2) 10**
1. How to read and write data using CSV and Excel file? Give proper example.
 2. List and explain important attributes of a Data Frame with examples.
 3. Explain Dictionary Methods: Get(),Pop(),Popitem(),clear(),copy()
 4. Differentiate between: (1) Numpy array and Pandas Series
(2) Array and list.