

IMSc IT (FIN) (NEP) Sem.-4 Examination

DSC-M-FIN-244T

Adv Python Programming - Theory

Time : 1-00 Hour]

May-2025

[Max. Marks : 25

Instructions:

- **Figures to the right indicate Full Marks.**
- **Do not write anything on the question paper.**

Q.1	Explain the methods of collecting Secondary data & explain the precautions to be taken while using secondary data in research study.	(10)
	(OR)	
Q.1	What is Pandas in Python & Explain the key features and advantages of the Python library Pandas?	(10)
Q.2	Explain array indexing and slicing by giving appropriate examples.	(05)
	(OR)	
Q.2	What are the advantages of using NumPy arrays over Python Lists?	(05)
Q.3	Explain how you can set titles and labels in a Matplotlib graph with suitable code examples?	(05)
	(OR)	
Q.3	Explain how to customize marker shape, size, and color with suitable code examples.	(05)
Q.4	Attempt Any Five out of Seven. 1) DataFrame can have heterogeneous data types in different columns. True/False 2) What does the df.tail() & df.head() function do in Pandas? 3) What does df.loc[2, 'Age'] return in a Pandas DataFrame? a) The Value in column 2 and Row 'Age' b) The Entire 'Age' column c) The value at row index 2 and column named 'Age' d) An error 4) What does this code output? import numpy as np	(05)

(P.T.O)

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	<pre>arr = np.array([2, 4, 6, 8, 10]) print(arr[::2])</pre> <p>5) What type of graph is created by default when calling <code>plt.plot([1, 2, 3], [4, 5, 6])</code>?</p> <p>6) In Matplotlib, the function _____ is used to display a plot on the screen.</p> <p>7) NumPy stands for _____.</p>	
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