

## NEP - Semester End Examination – October 2025

Program: FYBSC Data Science - Sem I Course: Python Programming

Program Code: UGDS03 Course Code: NUDS101

Duration: 1 Hour Max. Marks: 30

## Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat diagrams wherever necessary.

Q. 1	Attempt any TWO of the following.	[10]	Course Outcome	Knowledge Level
	(a) Explain the execution process of a Python program.		CO1	L1
	(b) Write a Python program using a for loop to calculate the factorial of a given number.		CO2	L3
	(c) Define a set in Python. Explain with an example.		CO4	L1
	(d) Explain the role of break, continue, and pass in Python loops with examples.		CO3	L1
Q. 2	Attempt any TWO of the following.	[10]	Course Outcome	Knowledge Level
	(a) How are strings defined in python? Explain string immutability with an example.		CO1	L1
	(b) Predict the output i) import numpy as np arr1 = np.array([10, 20, 30]) arr2 = arr1 arr2[0] = 100 print(arr1, arr2)  ii) s = "PythonProgramming" print(s[0], s[-1]) part = s[2:8] new_s = part + "123" print(new_s) print(len(new_s))		CO2	L3
	(c) What is an array in Python and how is it created?		CO3	L1
	(d) What are identity and membership operators in Python? Explain with example.		CO4	L3
Q. 3	Attempt any TWO of the following.	[10]	Course Outcome	Knowledge Level
	(a) Write a Python program to: i. Create an array of integers. ii. Display the array elements using a loop. iii. Find and display the largest element in the array.		CO2	L3
	(b) Explain any 5 features of python.		CO3	L4
	(c) What are some commonly used dictionary methods? Explain with examples.		CO4	L3
	(d) Write a Python program that uses a function to check whether a number is prime or not.		CO1	L2

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