Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–V (NEW) EXAMINATION – WINTER 2022

Subject Code:3150713   **Date:04-01-2023**
Subject Name:Python for Data Science
Time:10:30 AM TO 01:00 PM   **Total Marks:70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	What is the role of python in data science?	**03**
	(b)	Explain the input function of python that demonstrates type casting.	**04**
	(c)	Explain following data structures of python with suitable example. 1. String 2. List 3. Tuple 4. Dictionary	**07**
Q.2	**(a)**	Differentiate: C and Python.	**03**
	(b)	How to format Date and Time in python. Explain it with example.	**04**
	(c)	Give comparison between Numpy and Pandas.	**07**
		OR	
	(c)	Write a python code to read data from text file.	**07**
Q.3	**(a)**	Explain %matplotlib magic function.	**03**
	(b)	Explain stemming and stop words removal operation in python.	**04**
	(c)	Write a python program to implement Fibonacci sequence for given input.	**07**
		OR	
Q.3	**(a)**	What are the magic functions in Jupyter? Explain with example.	**03**
	(b)	With example explain the concept of bags of words model.	**04**
	(c)	Write a python program that finds the factorial of a natural number n.	**07**
Q.4	**(a)**	Explain labels, annotations and legends.	**03**
	(b)	Explain with example how to parse XML and HTML.	**04**
	(c)	Write a python code that demonstrate hashing trick.	**07**
		OR	
Q.4	**(a)**	Explain any three functions from Scikit learn.	**03**
	(b)	Explain how to create data science pipeline.	**04**
	(c)	Write a python program to demonstrate the concept of skewness and kurtosis.	**07**
Q.5	**(a)**	Explain EDA in detail.	**03**
	(b)	Write a python code to access data from web.	**04**
	(c)	Write a small code to perform following operations on data: Slicing, Dicing, Concatenation, Transformation.	**07**
		OR	
Q.5	**(a)**	Explain Z-score standardization.	**03**
	(b)	How to Obtain online graphics and multimedia. Explain with example.	**04**
	(c)	Write a code to draw pie chart using python's library.	**07**

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