

GUJARAT TECHNOLOGICAL UNIVERSITY

B.VOC- SEMESTER-VI EXAMINATION – WINTER 2024

Subject Code:21160204

Date:27-11-2024

Subject Name: Python for Data Science

Time:02:30 PM TO 04:30 PM

Total Marks:50

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.

		Marks
Q.1	(a) Explain String and its methods in detail.	05
	(b) Explain Python Functions in detail.	05
Q.2	(a) Differentiate List and Tuple in Python.	05
	(b) Explain the phases of Data Science Pipeline.	05
	OR	
	(b) What do you mean by Exploratory Data Analysis? List and explain the task which needs to be performed in EDA.	05
Q.3	(a) Summarize the characteristics of NumPy, Pandas, Scikit-Learn and matplotlib libraries along with their usage	05
	(b) Explain DataFrame in Pandas with example.	05
	OR	
Q.3	(a) Explain HTML parsing using Beautiful soup.	05
	(b) Explain the use of following libraries of python in data science. 1) Matplotlib 2) Scikit-learn	05
Q.4	(a) Describe the three levels of flat-file dataset. Explain any two with the help of example.	05
	(b) Write a python code to read the local image, obtain statistics about that image, and display the image onscreen.	05
	OR	
Q.4	(a) Explain Slicing rows and columns with example.	05
	(b) Write a small code to perform following operations on data: Slicing, Dicing, Concatenation, and Transformation.	05
Q.5	(a) What is the use of labels and legends in plot? Explain with example.	05
	(b) Differentiate: Bar graph vs. Histogram	05
	OR	
Q.5	(a) Write a python code to draw two lines on plot. Both lines should be depicted with different colors.	05
	(b) Write a code to draw pie chart using python's library.	05
