

Enrolment No./Seat No _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE MINOR - SEMESTER-V EXAMINATION – SUMMER 2024

Subject Code:115AG01

Date:27-05-2024

Subject Name:Introduction to Data Analytics

Time:02:30 PM TO 05:00 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.

	Marks
Q.1 (a) List out the sectors in which Data Science is used. Explain any one in brief.	03
(b) Discuss the fundamental types of Data Analytics.	04
(c) Write Python program to plot Line chart by assuming your own data and explain the various attributes of line chart.	07
Q.2 (a) What is the importance of Data Cleaning?	03
(b) Differentiate: Feature Engineering vs. Feature Selection	04
(c) Write short notes on “Exploratory Data Analysis (EDA) – Types and Tools”.	07
OR	
(c) What do you mean by Exploratory Data Analysis (EDA)? Explain the step-by-step process with example.	07
Q.3 (a) What are some common ways to gather domain knowledge?	03
(b) How do you perform Principal Component Analysis (PCA)?	04
(c) What are some common Machine Learning problems that Unsupervised Learning can help with?	07
OR	
Q.3 (a) What are some different techniques for dealing with categorical variables?	03
(b) How do you perform feature selection with Categorical Data?	04
(c) Explain Feature Selection Methods.	07
Q.4 (a) What is data visualization? Why do we need data visualization?	03
(b) What are the advantages and benefits of good data Visualization?	04
(c) How to apply the principles of successful data visualization in detail?	07
OR	
Q.4 (a) What is smart data? Write advantages of them.	03
(b) List out the tools/software used for reporting and visualization. Explain anyone.	04
(c) Draw the different graphs used in visualization. Also explain how to choose and apply the graph for visualization.	07
Q.5 (a) Differentiate: Dynamic reports vs. Dynamic visualization	03
(b) What are next gen data scientists? Write their role for the same.	04
(c) Write short notes on “Ethical Issues of Data Science”.	07

OR

- Q.5** (a) Why data visualization is important for any career? **03**
(b) Write the benefits of ethical challenges in data science. **04**
(c) List out the Major Applications of Data Science. Explain any two of them. **07**
