GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VI EXAMINATION – SUMMER 2025

Subject Code: 3160717   **Date: 26-05-2025**
Subject Name: Data Visualization
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.**

			MARKS
Q.1	**(a)**	What is AJAX in context of data reading? Explain use of it with an example.	**03**
	(b)	Write the steps of styling your data using XSLT taking example data of your choice..	**04**
	(c)	What are Charting Primitives? Explain any three chart types with example of each.	**07**
Q.2	**(a)**	Explain the reading and displaying of the JSON content in brief.	**03**
	(b)	What is linear interpolation? How it is important in Charting?	**04**
	(c)	Explain the difference between <canvas> tag and SVG.	**07**
		OR	
	(c)	What is Google API? Write HTML code to display a pie chart of "Product Sales" using Google APIs.	**07**
Q.3	**(a)**	Explain the significance of D3 using various application instances.	**03**
	(b)	Explain Nested Selections in D3.	**04**
	(c)	Explain how to use the HTML5 canvas to render dynamic column charts in brief.	**07**
		OR	
Q.3	**(a)**	Explain Selection in D3.	**03**
	(b)	Explain Data Joining in D3.	**04**
	(c)	How Chart Animations work? Explain with an example of Google Chart APIs.	**07**
Q.4	**(a)**	Explain the importance of update, enter, and exit function in D3.	**03**
	(b)	Explain interactive buttons with suitable example.	**04**
	(c)	How to add Play button to the page? Explain with example.	**07**
		OR	
Q.4	**(a)**	Explain use of DOM in D3.	**03**
	(b)	How can you interrupt a play button? Explain with an example code.	**04**
	(c)	What are transitions? How they work? How they can be chained together?	**07**
Q.5	**(a)**	Explain designing of bullet graph.	**03**
	(b)	Explain the advantages of using Graphics_Library of graphs in brief.	**04**
	(c)	What are dashboard design issues and assessment of needs?	**07**
		OR	
Q.5	**(a)**	Explain designing of sparkline graph.	**03**
	(b)	Explain the characteristics of a well designed dashboard.	**04**
	(c)	Explain the critical design practices in detail.	**07**

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