

Priyadarshini College of Engineering, Nagpur
Sessional Examination (2023-24) Odd Semester
B. Tech. Seven Semester (Computer Technology) (C. B. C. S.)
DATA VISUALIZATION
(Elective IV)

P. Pages: 2
Time: Three Hours

PCE/KW/23/BTCT702T-3
Max. Marks: 70

Notes:

- 1) All questions carry marks as indicated.
- 2) Solve Question 1 or Question 2 *1a, 1b*
- 3) Solve Question 3 or Question 4 *4a, 4b 1/2*
- 4) Solve Question 5 or Question 6 *6a*
- 5) Solve Question 7 or Question 8 *7a*
- 6) Solve Question 9 or Question 10 *9a, 9b i) ii)*
- 7) Due credit will be given to neatness and adequate dimensions.
- 8) Assume suitable data wherever necessary.
- 9) Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.	Questions	CO	BL	Marks
1	a) What is data visualization? Differentiate between Descriptive and Inferential Statistics. b) Explain data types of the R-object with example.	CO1	2 2	6 8
	OR			
2	a) Explain the statement of Hypothesis in detail. b) Explain in short the following term i) Random Variables ii) Normal Probability Distribution	CO1	2 2	7 7
3	a) Explain Scatter Plot ? Also explain the advantage and limitation of scatter plot. b) What is data frame and how it is created in R ? Explain with suitable example.	CO2	2 2	7 7
	OR			
4	a) Explain Bar plot? Write a code in R to plot bar plot by taking suitable parameters. b) Explain Box and Histogram plot with advantage and limitation.	CO2	2 2	8 6
5	a) What is Conditional Statements? Explain with example. b) Write a code in python with numpy module to create an array and find sum of all element.	CO3	2 3	8 6
	OR			
6	a) What is dictionary? Explain the methods available in dictionary. b) Write a code in python to read the csv file using pandas module.	CO3	2 3	8 6
7	a) Explain Matplotlib in details with suitable example. b) Write a python code to generate a Line Plot with matplotlib.	CO4	2 3	8 6
	OR			
8	a) List out all Specialized Visualization Tools using Matplotlib? Explain any one in detail. b) Explain the following term i) Bubble Plots ii) Waffle Chart	CO4	2 2	8 6
9	a) Explain seaborn with functionalities and usage. b) Describe in details the following term i) Matrix Plots ii) Regression plot	CO5	2 1	7 7

	OR			
10	<p>a) Explain Spatial Visualizations and Analysis in Python with Folium?</p> <p>b) An e-commerce company ' wants to get into logistics "Deliver4U" . It wants to know the pattern for maximum pickup calls from different areas of the city throughout the day. This will result in:</p> <p>i) Build optimum number of stations where its pickup delivery personnel will be located.</p> <p>ii) Ensure pickup personnel reaches the pickup location at the earliest possible time. For this the company uses its existing customer data in Delhi to find the highest density of probable pickup locations in the future.</p>	CO5	2 3	4 10