

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Third Semester**Artificial Intelligence and Data Science***AD3301 – Data Exploration and Visualization***Regulations - 2021**Duration : 3 Hrs**Maximum : 100 Marks***PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	State Exploratory Data Analysis (EDA).	L2	1	2
2.	Outline the purpose of data aggregation.	L2	1	2
3.	Differentiate between Line Plot and Scatter Plot.	L2	2	2
4.	Brief the geographic data visualization with basemap.	L2	2	2
5.	Compare Range and Standard Deviation.	L4	3	2
6.	Infer the purpose of smoothing a time series date.	L2	3	2
7.	Outline the contingency tables in statistics.	L2	4	2
8.	Summarize the steps to handle several batches.	L2	4	2
9.	List the characteristics of three variable contingency table.	L1	5	2
10.	Illustrate the concept of grouping in time series analysis.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Compare and contest EDA with Classical and Bayesian analysis with examples.	L2	1	8
	ii Elaborate the various software tools for EDA that are used for data analytics.	L2	1	8
	Or			
	b Explain the various transformation techniques in EDA with an example.	L2	1	16
12.	a Examine in detail about the module in which Matplotlib is used for data visualization.	L4	2	16
	Or			
	b Analyse and explain the 3D data visualization, its components in detail.	L4	2	16
13.	a Explain the significance of numerical summaries in single variable analysis.	L2	3	16
	Or			
	b Outline the process of scaling and standardizing variables with suitable examples.	L2	3	16

14.	a	i	Explain the importance of relationships between two variables in data analysis.	L2	4	8
		ii	Illustrate the construction and interpretation of percentage tables.	L2	4	8
Or						
	b	i	Outline the role of scatterplots in visualizing relationships.	L2	4	8
		ii	Explain the concept of transformations in data analysis and give examples.	L2	4	8
15.	a		Examine the characteristic of multivariate analysis with respected data visualization.	L4	5	16
	Or					
	b		Analyze the importance of resampling in Time Series Analysis with an example.	L4	5	16