

Model Question Paper
ANURAG Engineering College
 (An Autonomous Institution)
III B.Tech. II Semester Regular Examinations, June -2025
DATA ANALYTICS
 (COMMON TO CSE, CSE(AI & ML), IT)

Time: 3 Hours

Max.Marks:60

Section – A (Short Answer type questions)		(10 Marks)		
Answer All Questions		Course Outcome	B.T Level	Marks
1.	What is data preprocessing? Discuss its significance in data analytics.	CO1	L1	1M
2.	Define data quality. How does it affect data analysis?	CO1	L1	1M
3.	Define and explain the different types of data (nominal, ordinal)	CO2	L1	1M
4.	List and explain the tools commonly used for data analytics.	CO2	L1	1M
5.	Define variable rationalization in the context of regression modeling.	CO3	L1	1M
6.	What is a confusion matrix?	CO3	L1	1M
7.	What is the difference between supervised and unsupervised learning?	CO4	L2	1M
8.	What are time series methods?	CO4	L1	1M
9.	Explain geometric projection visualization techniques with an example.	CO5	L2	1M
10.	What are the benefits of using visualization techniques for data exploration?	CO5	L1	1M
Section – B (Essay Questions)				
Answer all questions, each question carries equal marks.		(5 X10M = 50M)		
11.	Discuss the importance of data cleaning and the steps involved in cleaning a dataset.	CO1	L3	10M
OR				
12.	Explain the different sources of data with examples. Discuss the role of sensors in data collection.	CO1	L2	10M
13.	Discuss the different data modeling techniques used in data analytics. Provide examples of each.	CO2	L2	10M
OR				
14.	What is missing data imputation? Explain the different methods to handle missing values in datasets.	CO2	L3	10M
15.	Explain the process of least square estimation and its application in regression analysis.	CO3	L3	10M
OR				
16.	How does logistic regression apply to business domains like marketing, finance, and healthcare? Provide examples.	CO3	L3	10M

17.	What is overfitting in decision trees? Explain the methods used to handle overfitting.	CO4	L4	10M
OR				
18.	Explain the ETL process and its importance in data analytics. Provide examples of its implementation.	CO4	L4	10M
OR				
19.	Explain the different types of data visualizations used in pixel-oriented visualization techniques.	CO5	L2	10M
OR				
20.	What is hierarchical visualization? Provide examples of hierarchical data and how it can be represented.	CO5	L3	10M