R22 Regulation *Subject code: 4P7HA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Supplementary Examinations, May 2026

EXPLORATIORY DATA ANALYSIS

(CSE(DS))

Maximum Marks: 60 Date:14.05.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	Bloom Tx
1.a)	List any three components of the Epicycle of Analysis.	1M	1	L1
b)	List any two methods for forming expectations before analysis.	1M	1	L1
c)	Define the Epicycle of Analysis in the context of question refinement.	1M	2	L1
d)	Identify the first step when applying the Epicycle to a question.	1M	2	L1
e)	What is meant by formulate your question in EDA?	1M	3	L1
f)	Why do we check the top and bottom of a dataset?	1M	3	L1
g)	List any two ways to refine our expectations after seeing data	1M	4	L1
h)	Define a linear relationship in data.	1M	4	L1
i)	Define formal modeling.	1M	5	L1
j)	Identify one benefit of using formal models.	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
2	List the Explain Epicycles of analysis: i). Setting the Scene. ii). Epicycle of Analysis.	 5 5	1	L1
	OR			
3	List the Explain Epicycles of analysis: i). Comparing Expectations to Data. ii). Applying the Epicycle of Analysis process.	10	1	L1
4	Explain how the epicycle of Analysis can be applied to refine research questions iteratively.	10	2	L2
	OR			
5	Evaluate why some questions are easier to translate into measurable data problems than others.	10	2	L2
6	Explain the complete process of Exploratory Data Analysis (EDA)- from Formulating your question to trying the easy solution first, with suitable examples.	10	3	L2

	OR			
7	Examine and justify the need to Validate data With at least One External Data Source, Give examples of scenarios where external validation changed analysis outcomes.	10	3	L4
8	Illustrate with an example how a Model sets expectations for what patterns should appear in data.	10	4	L2
	OR			
9	Demonstrate how continuous comparison between models and data leads to model improvement.	10	4	L2
10	Evaluate how Formal Modeling supports decision making through association and prediction analyses.	10	5	L5
	OR			
11	Discuss the significance of Associational Analysis in identifying relationships between variables within a dataset.	10	5	L6