

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III-B.TECH-I-Semester End Examinations (Regular) - December- 2025
DATA SCIENCE APPLICATIONS
(CSD)

[Time: 3 Hours]**[Max. Marks: 60]**

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

PART-A**(10 Marks)**

1. a)	Define Data Science.	[1M]
b)	What are the Security Issues?	[1M]
c)	What is Data Transformation in Data science?	[1M]
d)	What is data integration in data science?	[1M]
e)	What is ANOVA formula?	[1M]
f)	Define Standard Deviation.	[1M]
g)	What is simple regression and multiple regression?	[1M]
h)	What are in-sample evaluation measures?	[1M]
i)	How is generalized error calculated?	[1M]
j)	Define parameter grid search.	[1M]

PART-B**(50 Marks)**

2.	Explain about various stages in data science project?	[10M]
OR		
3.	Analyze the roles of Data Science in detail.	[10M]
4.	Explain data collection strategies in detail.	[10M]
OR		
5.	Explain Data cleaning in detail.	[10M]
6.a)	What is a Box Plot? Explain how it helps in detecting outliers.	[5M]
b)	Explain the construction and applications of a Pivot Table in data analytics.	[5M]
OR		
7.	Describe ANOVA and correlation statistics.	[10M]
8.a)	What is prediction in Data Science?	[5M]
b)	What are the steps involved in predictive analysis?	[5M]
OR		
9.	What is polynomial regression and pipelining?	[10M]
10.	How do you predict ridge regression values? Explain in detail.	[10M]
OR		
11.	What is overfitting and under fitting in data science?	[10M]
