

Code No.: (R22DS515PE)

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H.T.No.

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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]

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