Note: This question paper contains two parts A and B. Part A is compulsory which carries 20 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 and may have a, b, c as sub questions. **PART-A** (20 Marks) 1. a) What is the significance of Data Analytics? [2M] Write about sensor data. b) [2M] c) Write short notes on Data Modeling. [2M] d) What are the benefits of NoSQL? [2M] e) What are the advantages and limitations of Linear Regression? [2M] f) What is Univariate Analysis? [2M] g) What is Time Series Method? [2M] h) Define ARIMA Model. [2M] i) Draw a scatter plot and explain where it is used? [2M] Why is Data Visualization required? Elaborate. i) [2M] **PART-B** (50 Marks) 2. Define outlier. What are the methods applied for detection and treatment of outliers? [10M] OR Explain about data processing in detail. 3. [10M] 4. In detail analyze various popular tools being used for data analytics. [10M] OR 5. Compare SQL and NoSQL databases. [10M] 6. Explain in detail about the regression concept and Least Square Estimation method. [10M] OR 7. Draw and explain model building life cycle in Data Analytics. [10M] Write in detail about Regression vs Segmentation. 8. [10M] OR Explain the concept of pruning and complexity in decision trees. 9. [10M] 10. Explore different pixel oriented visualization techniques. [10M] OR 11. Explain the process of visualizing complex data and relations. [10M] ******

[Time: 3 Hours]

CMR ENGINEERING COLLEGE: : HYDERABAD UGC AUTONOMOUS IV-B.TECH-I-Semester End Examinations (Supply) - April- 2025

DATA ANALYTICS (\mathbf{IT})

H.T.No.

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[Max. Marks: 70]

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Code No.: IT701PC