Code No.: AD865PE   R20   H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
IV–B.TECH–II–Semester End Examinations (Advanced Supply) – June - 2025
BUSINESS INTELLIGENCE AND ANALYTICS
(AI&DS)

[Time: 3 Hours]   [Max. Marks: 70]

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) How can predictive analytics improve vaccine distribution?   [2M]
   b) What is the role of machine learning in Big Data Analytics?   [2M]
   c) What is the significance of Watson's victory on Jeopardy!?   [2M]
   d) Define the role of R in Text Analytics.   [2M]
   e) How does Sentiment Analysis help in improving customer experience?   [2M]
   f) What is the significance of sentiment scoring in Speech Analytics?   [2M]
   g) List two techniques used in Web Content Mining.   [2M]
   h) What is the primary function of Google Analytics?   [2M]
   i) Define Social Media Analytics.   [2M]
   j) How does What-If Analysis assist in evaluating decision outcomes?   [2M]

PART-B   (50 Marks)
2. Discuss how Management Information Systems (MIS) and Decision Support Systems   [10M]
    (DSS) complement each other in decision-making.
                                   OR
3. Explain the various stages in the Business Analytics life cycle with suitable examples.   [10M]

4. Analyze the significance of sentiment analysis and text classification in NLP with   [10M]
    real-world applications.
                                   OR
5. Discuss the role of popular Text Mining tools such as Rapid Miner, KNIME, and   [10M]
    others in data analysis.

6. Explain the role of Natural Language Processing (NLP) and machine learning in   [10M]
    Sentiment Analysis.
                                   OR
7. Describe the Sentiment Analysis process in detail with emphasis on data   [10M]
    preprocessing and feature extraction.

8. Explain the architecture and working of a Search Engine with relevant components.   [10M]
                                   OR
9. Define Web Usage Mining and explain its techniques with real-world applications.   [10M]

10. Analyze the significance of centrality, density, and clustering in Social Network   [10M]
    Analysis.
                                   OR
11. Discuss the key techniques used in Sensitivity Analysis and their applications in   [10M]
    optimization models.
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