

AS PER AP-CBCS SYLLABUS 2023-2024

COMPUTER APPLICATIONS(MAJOR/MINOR)

3RD YEAR – SEMESTER - V

BUSINESS ANALYTICS

(Common to All Universities in AP)

UNIT I: BUSINESS ANALYTICS

definition, Components of Business Analytics, Types of Business Analytics methods, Benefits of Business Analytics, Business Analytics Tools, Applications of Business Analytics, Trends in Business Analytics

Case Study:

- 1.Retail Analytics
- 2.Marketing Analytics

UNIT – II: DESCRIPTIVE ANALYTICS, STATISTICS

Types of Statistics, Types of Data, Measure of Central Tendency: Mean, Median, Mode, Standard Deviation, Variance

Case Study:

- 1.Financial Analytics
- 2.Social Media and Web Analytics

UNIT-III: OLAP, OLAP OPERATIONS

Roll Up, Drill Down, Slice and Dice, Pivot, Types of OLAP, OLAP Tools, OLTP, Characteristics of OLTP, OLTP advantages and disadvantages,

Case Study: Working with any one of the OLAP Tools

UNIT-IV: ARCHITECTURE & COMPONENTS OF BUSINESS INTELLIGENCE

Architecture and Components of Business Intelligence, Business Intelligence for Management, Operational BI, What is Business Intelligence, Benefits of BI, Roles and Responsibilities of BI, Overview of Popular BI Tools in Market

Case Study: Real-Time Credit and Debit Card Fraud Detection, an HPE Shadowbase

UNIT-V: DATA MINING

Data Mining Concept, Concepts of data mining model with its development and deployment in business scenario, Types of Data Mining Models, Machine Learning: definition, How ML works, Features and Importance of ML, Machine Learning Concepts: Classification of ML

Case Study: Healthcare Analytics



IMPORTANT QUESTIONS

LEVEL – 1

UNIT-I: BUSINESS ANALYTICS

- ❖ Define Business Analytics and explain its significance in modern business decision-making. 1
- ❖ Discuss the key components of Business Analytics and how they contribute to data-driven strategies. 3
- ❖ Describe the various types of Business Analytics methods and their applications. 4
- ❖ Analyze the benefits of implementing Business Analytics in organizations. 7
- ❖ Examine the applications of Business Analytics across different industries. 11
- ❖ Identify and explain the current trends in Business Analytics. 13
- ❖ Discuss the importance of data quality and governance in Business Analytics. 15
- ❖ Analyze the challenges faced by organizations in implementing Business Analytics solutions. 18

UNIT-II: DESCRIPTIVE ANALYTICS, STATISTICS

- ❖ Differentiate between Descriptive and Inferential Statistics with examples. 38
- ❖ Describe the various types of data in statistics and provide examples for each. 40
- ❖ Explain the concept of Mean as a measure of central tendency and discuss its advantages and disadvantages. 43

- ❖ Discuss the Median as a measure of central tendency and its applicability in different data distributions.45
- ❖ Define Standard Deviation and explain how it measures data dispersion.48
- ❖ Explain Variance and its relationship with Standard Deviation in the context of data variability.51
- ❖ Compare and contrast Mean, Median, and Mode, highlighting scenarios where each is most appropriate.52
- ❖ Discuss the importance of understanding data types and measures of central tendency in statistical analysis.54

UNIT-III: OLAP, OLAP OPERATIONS

- ❖ Explain the various OLAP operations: Roll-Up, Drill-Down, Slice, Dice, and Pivot, with suitable examples.68
- ❖ Describe the different types of OLAP systems: MOLAP, ROLAP, and HOLAP, highlighting their features and use cases.71
- ❖ Discuss the role of OLAP tools in business intelligence and decision-making processes.73
- ❖ Define Online Transaction Processing (OLTP) and explain its primary characteristics.74
- ❖ Analyze the advantages and disadvantages of OLTP systems in handling real-time transactions.78
- ❖ Evaluate the impact of OLAP operations on data visualization and reporting efficiency.80
- ❖ Discuss the challenges associated with implementing OLAP systems in large organizations.81
- ❖ Examine the security considerations and data integrity measures in OLTP systems.83

UNIT-IV: ARCHITECTURE & COMPONENTS OF BUSINESS INTELLIGENCE

- ❖ Define Business Intelligence (BI) and explain its significance in modern organizations.95
- ❖ Describe the architecture and key components of a Business Intelligence system.97
- ❖ Discuss the role of Business Intelligence in management decision-making processes.99
- ❖ Explain the concept of Operational Business Intelligence and how it differs from traditional BI.101
- ❖ Analyze the benefits of implementing Business Intelligence in an organization.103
- ❖ Evaluate the features and functionalities of popular Business Intelligence tools available in the market.107
- ❖ Discuss the challenges faced during the implementation of Business Intelligence systems and suggest possible solutions.110
- ❖ Examine the impact of Business Intelligence on organizational performance and competitiveness.....112

UNIT-V: DATA MINING

- ❖ Define data mining and explain its significance in business decision-making.124
- ❖ Describe the development and deployment process of data mining models in a business scenario.126
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- ❖ Define machine learning and discuss how it functions within the context of data analysis.130

- ❖ Explain the key features and importance of machine learning in modern business applications. 132
- ❖ Classify the different types of machine learning and provide examples of their use cases. 134
- ❖ Discuss the challenges and considerations in implementing machine learning models in business environments. 138
- ❖ Evaluate the impact of machine learning on predictive analytics and decision support systems. 140

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- ❖ Evaluate the role of Business Analytics tools in enhancing organizational performance. 9
- ❖ Explain how predictive analytics can be used to forecast business outcomes. 16
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 - ❖ Marketing Analytics 23
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❖ Explore the future trends in Business Intelligence and their potential implications for businesses. 114
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4. Explain the concept of Mean as a measure of central tendency and discuss its advantages and disadvantages.43
5. Discuss the Median as a measure of central tendency and its applicability in different data distributions.45

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