Register No.: ....   Name: ....

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION (R), DECEMBER 2023

(2020 SCHEME)

Course Code :   **20MET413**

Course Name: **Introduction to Business Analytics**

Max. Marks :   **100**   **Duration: 3 Hours**

PART A
(Answer all questions. Each question carries 3 marks)

1. Define Business Intelligence and explain its importance in modern organizations.
2. What are the components of a Business Intelligence system, and how do they help in understanding data and making decisions?
3. What is data, and what are some common data sources in the business analytics context?
4. How are unstructured and structured data different, and why are they important in data analysis?
5. What should be considered when creating a useful data warehouse?
6. How does the data mining process work?
7. Explain any three types of charts and graphs commonly used in business reports.
8. Why is data visualization essential for understanding complex data for business decision-making?
9. How does Internet of Things (IoT) help in collecting data and making decisions in business?
10. How does cloud computing make data storage, processing, and analysis easier for companies?

PART B
(Answer one full question from each module, each question carries 14 marks)

MODULE I

11. a) How does Business Analytics help a specific industry improve how it runs and makes decisions? Use an example to explain. (6)
    b) How are Transaction Processing and Analytic Processing different? Explain with real-world examples to support your explanation. (8)

OR

12. a) How can companies use Business Intelligence to become better than their competitors? Give at least two examples from different industries to explain. (8)

     b) What are the features of Big Data Analytics? Explain the difficulties and benefits of handling and using large sets of data. (6)

MODULE II

13. a) Explain the strengths and weaknesses of regression modeling techniques - linear and logistic, in predicting and interpreting business trends. Also explain how they are helpful in different types of businesses. (8)

     b) How can quartiles and the inter-quartile range be used in a real-life business example? Explain how they help in finding out how data is spread out and how it changes. (6)

OR

14. a) Why is it important to predict future trends in business? Explain how time series forecasting helps to make smart decisions for the future. (8)

     b) Evaluate the importance of data pre-processing in the context of statistical modeling, emphasizing how it enhances the accuracy and reliability of analytical results in business applications. (6)

MODULE III

15. a) How can data mining help a business work better? Illustrate with an example to show how it can help with making decisions. (8)

     b) Discuss the data warehousing process, outlining the steps involved in creating and maintaining a data warehouse, and explain how it differs from a Data Lake. (6)

OR

16. a) How can a particular industry use social media information to know more about customers and make marketing better? (8)

     b) Differentiate between text analytics and text mining, providing examples of their respective applications in real-world scenarios. (6)

MODULE IV

17. a) Explain the business performance management cycle, highlighting the key stages involved in monitoring and improving organizational performance (6)

     b) Explain how sales and marketing can use analytics to make customers more interested and make the business do better. Use an example from a particular industry. (8)

OR

18. a) Discuss the importance of key performance indicators (KPIs) in measuring and evaluating business performance, emphasizing their role in driving strategic decision-making.   (6)

     b) Explain how we can use performance measurements in the Human Resources department to see how well employees are doing and how well the organization is doing.   (8)

MODULE V

19. a) How can the Internet of Things help a certain industry work better for both the business and the customers? Use examples to show how data from IoT can help with business decisions.   (8)

     b) Discuss the use of location-based analytics in organizations, emphasizing how it enables businesses to leverage geographical data for targeted marketing and operational decision-making.   (6)

OR

20. a) Apply the principles of cloud computing to establish an efficient and scalable infrastructure for business analytics, considering the advantages and challenges associated with cloud-based data processing and storage.   (8)

     b) Explain the issues related to legality, privacy, and ethics in the context of business analytics, and discuss their implications for data collection and usage in organizations.   (6)

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