

122 FEB 2023 AN

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Question Paper Code	21306
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MBA - DEGREE EXAMINATIONS, NOV/DEC 2022

Second Semester

Master of Business Administration

20MBT207 - INFORMATION SYSTEMS AND BUSINESS ANALYTICS

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,</i>
<i>K-Level, CO</i> |
|--|-------------------------------------|
| 1. Identify the components of Information System | 2, K2, CO1 |
| 2. Recall the types of information system. | 2, K1, CO1 |
| 3. Define DBMS and list out any 3 characteristics. | 2, K1, CO2 |
| 4. Infer the term cloud computing and list out the types. | 2, K2, CO2 |
| 5. Recall big data and list out its characteristics. | 2, K1, CO3 |
| 6. List out any two advantages of business analytics. | 2, K1, CO3 |
| 7. Substantiate with two examples why data visualization is important in Business analytics. | 2, K1, CO4 |
| 8. Contrast between predictive and prescriptive analytics. | 2, K2, CO4 |
| 9. Give two examples how business analytics helps in insurance sector. | 2, K1, CO5 |
| 10. Paraphrase the term Data exploration. | 2, K1, CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain SDLC life cycle and elaborate on various software development life cycle methodologies. 13, K5, CO1
- OR**
- b) Explain the various types of Operations support systems and Management Support Systems. 13, K5, CO1
12. a) Explain in detail, Data Models and types with diagrams. 13, K5, CO2
- OR**
- b) Explain the types of database security systems used by various companies to avoid data manipulation. 13, K5, CO2
13. a) Explain the need and scope of Business Analytics and also differentiate how Business Analytics is from Business Intelligence. 13, K5, CO3

OR

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create **21306**

- b) Define Data Mining and also explain the process of data mining in detail. *13,K5,CO3*
14. a) Discuss the steps involved in Machine Learning and also elaborate on the types of ML. *13,K6,CO4*
- OR**
- b) Illustrate the process involved in predictive analytics and also explain the top models used in predictive analytics. *13,K2,CO4*
15. a) Explain the various techniques and methods to visualize data. *13,K4,CO5*
- OR**
- b) How dashboards are different from scorecard? Explain in detail. *13,K3,CO5*

**PART - C (1 × 15 = 15 Marks)
(Compulsory)**

16. **Boerse Stuttgart** *15,K5,CO6*

Company Background

Founded in 1860, Boerse Stuttgart now employs 300 people and is Europe's leading stock exchange organisation for private investors. With an average share of about 31 percent of the German market (March 2011), the company is Germany's second largest trading centre. In 2009, its overall turnover reached €105 billion, exceeding last year's result by about 23 percent. With more than 684,000 listed securities, the exchange has achieved an average daily trading volume of about €503 million since the beginning of 2011 (March 2011).

As a publicly supervised stock exchange, Boerse Stuttgart AG is subject to numerous legal requirements. Compliance with regulations requires complete traceable documentation of all business processes. As a result of strong organic growth and several recent acquisitions, the company was using a variety of solutions whose data could not be easily analyzed without a high level of manual effort. In particular, it was very difficult to perform ad-hoc analyses based on current business data to support the market control department in making strategic and operational decisions.

Persistent business growth also meant that the data volumes that needed to be processed daily were perpetually increasing. Moreover, new internal and external requirements for reporting and analysis were evolving, and it was becoming difficult to fulfill these requirements cost-effectively with the available methods and tools.

Business Objectives

- Consolidate all the data
- Comply to varying reporting requirements

Questions

1. What were the problems of Boerse Stuttgart?
2. What are the data available that can be used for an analytics solution?