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Question Paper Code	12362
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**MBA - DEGREE EXAMINATIONS, NOV / DEC 2023**  
Third Semester  
**Master of Business Administration**  
**20MBS305 - BUSINESS ANALYTICS AND BIG DATA**  
(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**  
Answer ALL Questions

- |   | <i>Marks,<br/>K-Level, CO</i> |
|---|-------------------------------|
| 1. Recall the term Business Analytics.                                    | <i>2,K1,CO1</i>               |
| 2. Associate the various job roles related to Business Analytics.         | <i>2,K2,CO1</i>               |
| 3. Articulate the features of DBMS: Concurrency Control & Data Integrity. | <i>2,K2,CO2</i>               |
| 4. List the sources of Secondary data with suitable examples.             | <i>2,K1,CO2</i>               |
| 5. Examine the applications of Logistic Regression.                       | <i>2,K2,CO3</i>               |
| 6. Deduce the term Support Vector.  | <i>2,K2,CO3</i>               |
| 7. “Collective Inferencing improves Relational Classification”- Justify.  | <i>2,K2,CO4</i>               |
| 8. Identify the purpose of Relational Neighbor Classifier.                | <i>2,K2,CO4</i>               |
| 9. Paraphrase Behavioural Analytics.                                      | <i>2,K2,CO5</i>               |
| 10. Recite the importance of Client Profitability Analytics.              | <i>2,K2,CO5</i>               |

**PART - B (5 × 13 = 65 Marks)**  
Answer ALL Questions

- |   |                  |
|---|------------------|
| 11. a) Examine the types of analytics with suitable examples.               | <i>13,K3,CO1</i> |
| <b>OR</b>   |                  |
| b) Describe the historical overview of data analysis.                       | <i>13,K2,CO1</i> |
| 12. a) Illustrate the various data visualization Techniques.                | <i>13,K2,CO2</i> |
| <b>OR</b>   |                  |
| b) Enumerate the steps in hypothesis testing and modeling.                  | <i>13,K2,CO2</i> |
| 13. a) List and explain the assumption of linear regression.                | <i>13,K2,CO3</i> |
| <b>OR</b>   |                  |
| b) Explain the various metrics to evaluate classification models.           | <i>13,K2,CO3</i> |
| 14. a) Visualize the sequence rule with the help of market basket analysis. | <i>13,K2,CO4</i> |
| <b>OR</b>   |                  |
| b) Discuss about Relational logistic regression in detail.                  | <i>13,K2,CO4</i> |

15. a) Evaluate Financial Analytics in detail. *13,K4,CO5*
- OR**
- b) Summarize the key features of effective Supply Chain Analytics. *13,K2,CO5*

**PART - C (1 × 15 = 15 Marks)**

16. a) Papa Gino's, Inc. *15,K5,CO5*

Company Background Based in Dedham, Massachusetts, Papa Gino's, Inc. is the parent company of the Papa Gino's Pizzeria and D'Angelo Grilled Sandwiches restaurant chains. The company operates more than 275 company-owned and franchised Papa Gino's, D'Angelo and dual-location restaurants and employs more than 5,000 people across New England. Both D'Angelo and Papa Gino's are committed to providing high-quality products, attentive service, clean, convenient, attractive restaurants and a premium value experience for every guest. To maintain competitive advantage and support business growth, the Papa Gino's senior management team decided to rethink its information technology strategy and invest in innovation. The company's IT team was tasked with assessing the existing technology landscape and identifying the areas where new systems and processes could deliver the greatest business value. It is found that they used spreadsheet to analyze operational performance which took months to complete. They created a loyalty program for regular customers which provides rewards that can be used on future orders. and, thanks to Cognos, we have been able to track its effect on sales.

**Business Objectives**

Consolidate all the data Optimize labor costs while ensuring that restaurants have the right number of staff. Track the time it takes to deliver orders to customers' homes compared to the estimated time Identify the effectiveness of the loyalty program Identify the order method that works best for the company so that this order method can even be promoted further.

**Questions**

1. What were the problems of Papa Gino's, Inc.?
2. What are the data available that can be used for an analytics solution?
3. Recommend the solutions that can be provided for Papa Gino's, Inc. to help them solve their problems?