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Question Paper Code	13131
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**MBA - DEGREE EXAMINATIONS, NOV / DEC 2024**

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

*Marks* *K-*  
*Level* *CO*

- |   |   |    |     |
|---|---|----|-----|
| 1. Recall the term Business Analytics.                          | 2 | K1 | CO1 |
| 2. State the importance of Diagnostic analytics.                | 2 | K1 | CO1 |
| 3. Write short notes on : Concurrency Control & Data Integrity. | 2 | K1 | CO2 |
| 4. List out the five distinct stages of Data Science Lifecycle. | 2 | K1 | CO2 |
| 5. Label decision tree with an example.                         | 2 | K1 | CO3 |
| 6. Compare Linear Regression and Logistic Regression.           | 2 | K2 | CO3 |
| 7. Paraphrase the term Association Rule.                        | 2 | K2 | CO4 |
| 8. Associate segmentation in relation to Marketing.             | 2 | K2 | CO4 |
| 9. Rephrase Behavioural Analytics.                              | 2 | K2 | CO5 |
| 10. Infer the term Sentiment Analysis.                          | 2 | K2 | CO5 |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

- |   |    |    |     |
|---|----|----|-----|
| 11. a) Explain the skill set, roles & responsibilities required for Data Analyst, Data Engineer and Data Scientist. | 13 | K2 | CO1 |
| <b>OR</b>   |    |    |     |
| b) Outline the industrial applications of Business Analytics.   | 13 | K2 | CO1 |
| 12. a) Describe the unique characteristics of Big Data.   | 13 | K2 | CO2 |
| <b>OR</b>   |    |    |     |
| b) Illustrate the various data visualization Techniques.  | 13 | K2 | CO2 |
| 13. a) Demonstrate the framework for building multiple linear regression.   | 13 | K2 | CO3 |
| <b>OR</b>   |    |    |     |
| b) Infer the various metrics to evaluate classification models.   | 13 | K2 | CO3 |

14. a) Demonstrate Market Basket Analysis and explain Sequence rule. 13 K3 CO4
- OR**
- b) Identify the commonly used Social network metrics with examples. 13 K3 CO4
15. a) Evaluate the applications of data analytics in financial sector. 13 K4 CO5
- OR**
- b) Deduce the key features of effective Supply Chain Analytics. 13 K4 CO5

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

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 provide 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:**

- (i) What are the data available that can be used for an analytics solution?
- (ii) Recommend the solutions that can be provided for Papa Gino’s, Inc. to help them solve their problems?