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**PRESIDENCY UNIVERSITY**

**Bengaluru**

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| **End - Term Examinations – MAY 2025** |
| **Date:** 22-05-2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOIS | **Program:** BCA | |
| **Course Code:** CSA3007 | **Course Name:** DATA ANALYTICS AND BUSINESS INTELLIGENCE | |
| **Semester**: VI | **Max Marks**: 100 | **Weightage**: 50% |

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| **CO – Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **25** | **35** | **40** | **-** | **-** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

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| --- | --- | --- | --- | --- |
| **Answer ALL the Questions. Each question carries 2marks. 10Q x 2M=20M** | | | | |
| **1.** | List the benefits of Data Analysis? | **2 Marks** | **L1** | **CO1** |
| **2.** | List the challenges of Data Sampling? | **2 Marks** | **L1** | **CO1** |
| **3.** | List the 2 types of Data Sampling? | **2 Marks** | **L1** | **CO2** |
| **4.** | List the types of Data Analysis? | **2 Marks** | **L1** | **CO2** |
| **5.** | Recall the Data Analytics Techniques? | **2 Marks** | **L1** | **CO1** |
| **6.** | List 5 Data Sources? | **2 Marks** | **L1** | **CO2** |
| **7.** | Define Binary Encoding and Count Encoding? | **2 Marks** | **L2** | **CO2** |
| **8.** | Outline the characteristics of Unstructured Data? | **2 Marks** | **L2** | **CO3** |
| **9.** | Outline the possible solution of storage of Semi-Structured Data? | **2 Marks** | **L2** | **CO3** |
| **10.** | Outline the ease of Extraction of Structured Data? | **2 Marks** | **L2** | **CO3** |

**Part B**

**Answer the Questions. Total Marks 80M**

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| 11. | a. | Explain sources of data with data quality attributes and constraints | 10 Marks | L2 | CO2 |
|  | **b.** | Explain the benefits, process and technique of data sampling | **10 Marks** | **L2** | **CO1** |
| Or | | | | | |
| 12. | **a.** | Explain the benefits of Data visualization in 5 Industries and give example of certain visualization techniques with appropriate diagrams | **10 Marks** | **L2** | **CO1** |
|  | **b.** | Explain Feature Encoding and write the python code for Feature Encoding | **10 Marks** | **L3** | **CO2** |

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| 13. | a. | Explain Outliers, types and 2 types of finding the Outliers and their corresponding python code | 10 Marks | L3 | CO2 |
|  | **b.** | Explain ETL with a neat diagram | **10 Marks** | **L2** | **CO3** |
| Or | | | | | |
| 14. | **a.** | Write down the benefits of Data Cleaning and Outline the data cleaning Diagram | **10 Marks** | **L2** | **CO2** |
|  | **b.** | Explain Data Analytics and its importance? Explain Python Libraries for Data Analytics | **10 Marks** | **L2** | **CO1** |

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| 15. | a. | Explain the Normalization technique in Data Cleaning and and their corresponding python code | 10 Marks | L3 | CO2 |
|  | **b.** | Explain Discretization in Detail | **10 Marks** | **L2** | **CO2** |
| Or | | | | | |
| 16. | **a.** | Explain OLTP its characteristics, advantages and disadvantages? | **10 Marks** | **L2** | **CO3** |
|  | **b.** | Explain Sources of Data with Data Quality Attributes and Constraints | **10 Marks** | **L2** | **CO2** |

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| 17. | a. | Explain SSIS in detail | 20 Marks | L2 | CO3 |
| Or | | | | | |
| 18. | **a.** | Explain BI process with neat diagram | **10 Marks** | **L2** | **CO3** |
|  | **b.** | Explain Data Cleaning and its techniques and their corresponding python code | **10 Marks** | **L3** | **CO2** |