

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII EXAMINATION – SUMMER 2025****Subject Code:2170715****Date:16-05-2025****Subject Name:Data Mining and Business Intelligence****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

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|------------|---|-----------|
| Q.1 | (a) Difference between association and classification. | 03 |
| | (b) Difference between Star Schema and Snowflake schema | 04 |
| | (c) Explain KDD process in detail. | 07 |
| Q.2 | (a) Differentiate between data warehouse and data mart. | 03 |
| | (b) Explain Different normalization methods. | 04 |
| | (c) What is data cleaning? Explain steps for handling the missing values in database. | 07 |

OR

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| (c) | Generate strong association rules for given dataset. (Min_supp = 60% and Min_conf = 80%) | 07 |
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TID	Item_bought
1	{M,O,N,K,E,Y}
2	{D,O,N,K,E,Y}
3	{M,A,K,E}
4	{M,U,C,K,Y}
5	{C,O,O,K,I,E}

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| Q.3 | (a) Explain ROLAP and MOLAP. | 03 |
| | (b) Discuss OLAP and OLTP. | 04 |
| | (c) Explain activities of data transformation. | 07 |

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| Q.3 | (a) Explain Support and Confidence measures by taking appropriate example. | 03 |
| | (b) What is classification? Discuss phases of classification. | 04 |
| | (c) Mean, median, mode and variance and standard deviation explain with suitable example | 07 |

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| Q.4 | (a) Give a list of data transformation strategies and explain any one in brief. | 03 |
| | (b) Define True Positive, True Negative, False Positive and False Negative. | 04 |
| | (c) Explain Back propagation neural network in detail | 07 |

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| Q.4 | (a) Differentiate prediction and classification. | 03 |
| | (b) What is classification? Explain classification process. | 04 |
| | (c) Explain decision tree algorithm with suitable example. | 07 |

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| Q.5 | (a) Explain role of business intelligence in market segmentation. | 03 |
| | (b) What is business intelligence? Give its advantages. | 04 |
| | (c) What is distributed file system? Explain HDFS architecture in detail. | 07 |

OR

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| Q.5 | (a) What is Big Data? | 03 |
| | (b) Difference between Data Mining and Text Mining | 04 |
| | (c) Write a short note on Hadoop MapReduce . | 07 |
