4MCAP2: DATA ANALYTICS LAB

Total No. of Hours: 72   **Hours/Week: 06**

Tool to be used: R

	Part – A
1	Expressions and Functions
2	Arrays and Vectors
3	Matrices
4	Lists
5	Data Frames& Factors
6	Frequency and Crosstabs
7	Data Interfaces – CSV, Excel, Binary Files
8	Data Exploration – Descriptive and Dispersion measures.
9	Data Visualization.
10	Correlation – Simple, Polychoric and Partial
	Part – B
11	Regression: - Linear, Multiple, Nonlinear and Logistic
12	t-tests: - One Sample, Independent and Paired
13	Association Analysis and Rule Speedup
14	Classification: Naïve Bayes Classifier
15	Classification: Decision trees and Random Forest
16	Classification: K-Nearest Neighbour
17	Clustering: Partitioning clustering
18	Clustering: Hierarchical Clustering
19	Clustering: Density-based, Model-based and Fuzzy
20	Cluster Validation and Evaluation

Scheme of Evaluation

Sections	Criteria	Marks
Part A	Writing ONE program	10
	Execution of ONE program	15
Part B	Writing ONE program	10
	Execution of ONE program	15
	Enhancement	10
	Viva	10
Total		70