

**MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES
(DEEMED TO BE UNIVERSITY)**

**Faculty of Engineering and Technology
Department of Computer Science and Engineering
Assignment Sheet**

Subject Name: Data Science
Subject Code: BCS-DS-727
Max. Marks: 20

Assignment number: 01
Class / Semester: BTech CSE/7th
Time Allowed: 1 week

Q. No:		Mapped COs/BTL
Q1)	<p>Differentiate between Scatter plot & Box Plot. Draw the Five Number Summary Plot of the given dataset.</p> <p style="text-align: center;">35 10 30 25 75 10 30 20 20 10 40 50 40 30 60 70 25 40 10 60 20 80 40 25 20 10 20 25 30 50 80 20</p>	CO1/L1,L2
Q2)	<p>Construct a frequency distribution and a relative frequency histogram for the data set using five classes.</p> <p>Gasoline Consumption Data set: Highway fuel consumptions (in miles per gallon) for a sample of cars</p> <p style="text-align: center;">32 35 28 40 30 42 55 40 45 24 28 34 40 36 34 40 30 25 28 32 40 35 25 44 26 39 38 42 45 32</p>	C02/L1,L2.L3
Q3)	<p>Given the system of equations find the Rank and determine the system of equations is solvable.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> $\begin{aligned} 4x - 2y + 3z &= 1 \\ x + 3y - 4z &= -7 \\ 3x + y + 2z &= 5 \end{aligned}$ </div>	C02/L3
Q4)	Write down the components of optimization problem	CO3/ L1
Q5)	<p>Identify the Population and the Sample.</p> <p>a) A survey of 1000 U.S. adults found that 59% think buying a home is the best investment a family can make.</p> <p>b) A study of 33,043 infants in Italy was conducted to find a link between a heart rhythm abnormality and sudden infant death syndrome.</p>	CO2/L2

